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IRRADIATED FOODS AND IRRADIATED ORGANIC COMPOUNDS

THERAPEUTIC POSSIBILITIES *

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The inference that rickets in the child can be cured by exposure to the elements, particularly of the seashore and high altitudes, is far from being of recent date; but it is to the observations of Huldschinsky,[1] in 1919, that we owe the definite incontestible laboratory demonstration that it is light which is the specific curative agent. As a result, heliotherapy or, more specifically, actinotherapy, is gaining for itself a position in the physician's armamentarium that should have been its own long ago.

Hand in hand with the recognition of light as an important therapeutic agent there has developed a growing conviction that cod liver oil represents a remedial agent of such efficacy in the treatment of rickets that it, too, was credited with being a specific in the treatment of this disease. As a matter of fact, cod liver oil has been used almost from time immemorial by the simple fisher folk of England, Holland and France in the treatment of rickets, and various contributions, clinical and otherwise, have from time to time borne testimony to its value. However, direct experimental evidence was not presented until recently with the appearance of the publication of Shipley and his co-workers [2] of the Johns Hopkins laboratories.

The fact that such different agents as light and cod liver oil should have the same effect on rickets has made it incumbent on the research worker to supply the explanation or else admit definitely that little is known about the etiology of the disease. As has happened so often in the history of science, the answer has apparently been arrived at in an entirely unexpected manner.

In 1922, Hume,[3] and also Goldblatt and Soames [4] of the Lister Institute, made the interesting observation that the growth of rats, when placed on a ration deficient in what they supposed represented only vitamin A, could be prolonged by exposing them to the radiations of the quartz mercury vapor lamp. Later, Goldblatt and Soames [5] also showed that livers taken from rats which had been exposed to such radiations were able to induce growth in rats, while livers taken from non-irradiated rats were inactive. They announced that "the correct explanation must await the results of further studies on the nature of the fat soluble growth promoting factor as well as on the site and mode of its action."

At about this time it so happened that there was in progress in our rat colony an experiment designed to test out the comparative amounts of vitamin A and the antirachitic factor in butter fat and cod liver oil.[6] The technic [7] of these experiments required that some of the animals be exposed to ultraviolet radiations, it being assumed that animals which responded to this treatment did not have enough of the antirachitic factor in their diet. It was furthermore assumed that it would be advantageous to keep irradiated and non-irradiated animals in the same cages, as environmental variations would thereby be eliminated. It was a great surprise to us that irradiated and nonirradiated animals all grew alike except in one case in which the irradiated animals had been put into the cage with the nonirradiated five weeks after the latter had been started. In this instance the nonirradiated had started to grow at the time of the introduction of the irradiated. This, together with the fact that our technic had always given results distinguishing between irradiated and nonirradiated animals when kept in separate cages, suggested that the irradiated animals were able in some way or another to carry over an effect on the others. What it was, or how it was brought about, we were unable to say, but we [8] suspected that secondary radiations emanating from the irradiated animals might be responsible. Such a possibility appeared most disconcerting to us, because, if actually a fact, there obtained in turn the possibility that objects other than living animals might also have been active, thus jeopardizing the reliability of many of our former findings. The contentions of Hume and Smith [9] that

* The animal experiments reported were performed at the Laboratory of Agricultural Chemistry, University of Wisconsin. The experiments on infants were carried out at the Child Welfare Research Station, State University of Iowa.

* The experimental facts on which this paper is based were accumulated with the assistance of Dr. J. H. Jones, Dr. E. M. Nelson, Mrs. E. M. Nelson, Mr. Archie Black, Mr. Carl A. Hoppert, Miss Lois K. Stewart, Miss Blanche Riising and Miss Genivieve Stearns.

1. Huldschinsky, K.: Deutsch. med. Wchnschr. 45: 712, 1919.
2. Shipley, P. G.; Park, E. A.; McCollum, E. V.; Simmonds, Nina; and Parsons, H. T.: Experimental Rickets: Effect of Cod Liver Oil Administered to Rats with Experimental Rickets, J. Biol. Chem. 48: 343 (Jan.) 1921.
3. Hume, E. M.: Lancet 2: 1318 (Dec. 23) 1922.
4. Goldblatt, H., and Soames, K. M.: Lancet 2: 1321 (Dec. 23) 1922.
5. Goldblatt, H., and Soames, K. M.: Biochem. J. 17: 446, 1923.
6. Jones, J. H.; Steenbock, Harry; and Nelson, M. T.: Unpublished data.
7. Steenbock, Harry; Nelson, M. T., and Black, A.: J. Biol. Chem. 63: 275 (Nov.) 1924.
8. Steenbock, Harry: Patent Specifications, U. S. Patent Office, 1924.
9. Hume and Smith: Biochem. J. 17: 364, 1923.

air itself could be made stimulating to growth by exposure to ultraviolet rays was not particularly reassuring to us in this connection. However, when we subjected these various matters to experimental inquiry we found that not only was it impossible to activate air, but that irradiated animals stimulated growth in the nonirradiated indirectly and not directly. Apparently the excreta and possibly the skin secretions of these animals becomes activated, which, when consumed by the others, supplies the antirachitic factor in their deficient diet.[10] This becomes understandable in the light of what follows.

We had for some time been convinced that the English investigators had obtained a stimulation of growth in their animals when feeding livers from irradiated rats by virtue of the fact that these livers after irradiation contained the antirachitic factor. As the livers of nonirradiated rats were found inactive in this capacity, it appeared that light either synthesized the antirachitic factor or else brought about its translocation from other organs. As the former was open to experimental proof and as the latter appeared improbable, experiments to determine this were immediately initiated in the fall of 1923.

RESULTS OF EXPERIMENTS

Our first experiments,[11] in November and December, 1923, were carried out with a grain ration consisting of millet, 84; casein, 12, and salts, 4. Some of it was fed to rats without any further treatment, and another portion was exposed for thirty minutes to the radiations of a quartz mercury vapor lamp. This constituted an extreme test case, and little hope was entertained that the antirachitic factor would be produced in this ration. The attempt was made, merely because we suspected that the difference in antirachitic activity, which we had demonstrated for plant materials, might have its origin in varied solar illumination. Far more hopes were held out for positive results from an experiment in which rats were fed a basal ration of casein, 18; agar, 2; yeast, 8; salts, 4, and dextrin, 68, which was supplemented by the addition of 0.5 gm. of rat muscle per rat daily, which muscle had been exposed to ultraviolet light for thirty minutes after its removal from the body. This experiment was also controlled by the feeding of similar amounts of the same samples of muscle without irradiation. Much to our surprise, in each case it was found that rats getting the irradiated material grew rapidly, while those getting the untreated material were entirely unaffected. Analyses of the bones of these animals showed that, simultaneously with stimulation of growth, calcification of the bones had also been stimulated, bearing out our contention that we were here concerned with the production of an antirachitic factor.

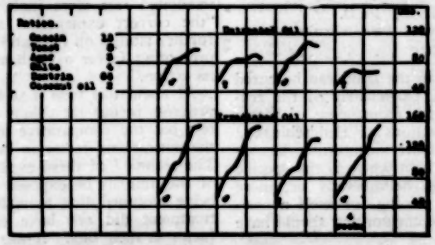

Fig. 1.—Growth promoting effect on rats when fed coconut oil that has been treated with ultraviolet light. In this case the oil had been irradiated with light of low intensity from a quartz mercury vapor burner run at from 40 to 50 volts and 4 amperes, at a distance of 2 feet for thirty minutes. In all cases, whether carrying the irradiated oil or not, growth was finally terminated by exhaustion of the reserves of vitamin A, which was purposely omitted from the ration because no known sources uncontaminated with the antirachitic factor are available. With this stimulation of growth, the ash content of the bones is increased from 2 to 6 per cent., proving that irradiation imparts antirachitic properties to the oil.

In our next experiments, carried out in March, 1924, our basal rat ration of casein, agar, salts, yeast and dextrin was supplemented with oils and fats that had been irradiated. We began to assume that possibly cod liver oil owed its antirachitic activity to solar radiation, most probably through the consumption by the cod fish of fishes living in shallow waters, which in turn subsist on plankton living in such an environment. To make the test crucial, we irradiated lard and olive oil with the quartz mercury light for thirty minutes and an active preparation of cod liver oil seventeen hours. All were then fed to rats in the ration mentioned above—which did not allow growth to take place because of its deficiency in the antirachitic factor—at a level of 2 per cent. Controls were also run to check up on the original activity of the fats. The cod liver oil was included in the series because it was assumed that if its activity was due to light, such activity ought to be permanent under the conditions selected. Much to our surprise, while we did find that the olive oil and lard had become antirachitically activated, as was also shown by Hess and his co-workers[12] for other oils some time later, the cod liver oil, on the other hand, was found to have lost its activity completely; at any rate, it was no longer able to stimulate growth as before. It was soon shown that this was not due to a toxicity imparted to the oil, because, on adding in addition a small amount of untreated oil to the ration, growth immediately resulted. Later trials showed us that artificially activated olive oil, like cod liver oil, will also lose its antirachitic activity if illuminated excessively, indicating the explanation for the aberrant reaction of the cod liver oil and suggesting that the active compound is not entirely stable. Later results prove that it is not to be assumed that all oils can be activated. To date we have tried lard, butter fat, olive oil, coconut oil (Fig. 1), cottonseed oil and corn oil and, when these have been fresh, have always been successful; but invariably attempts to activate old, rancid oils have so far resulted in failure. Here the difficulty does not lie in the presence of compounds such as free acids, glycerol or aldehyds, which prevent the activation and which are not found in fresh fats, but apparently in the fact that the compound bearing the activation has been destroyed, or at least so changed in character as to remain unaffected by light.

Our findings with coconut oil are particularly interesting. Coconut oil occupies a unique position among fats in that it is one of the few fats, aside from butter and cod liver oil, that have generally been credited with antirachitic potency. It is true that its activity is not marked, being even considerably less than butter, but

10. Nelson, E. M., and Steenbock, H.: J. Biol. Chem., **62**: 575 (Jan.) 1925.

11. Steenbock, Harry; and Black, A.: J. Biol. Chem. **63**: 405 (Sept.) 1924. Steenbock, Harry; Black, A., and Nelson, M. T.: Proc. Am. Chem. Soc., Ithaca, N. Y., September, 1924. Steenbock, Harry; and Nelson, M. T.: J. Biol. Chem. **63**: 209 (Nov.) 1924.

12. Hess, A. F., and Weinstock, Mildred: Experiments on the Action of Light in Relation to Rickets, Am. J. Dis. Child. **28**: 517 (Oct.) 1924; J. Biol. Chem. **62**: 301, 1924.

nevertheless it appears to be definite. Imagine our surprise when we found that oil extracted in our laboratory was entirely devoid of any activity. This has caused us to raise the question as to whether the antirachitic activity of commercial coconut oil may not be due to the fact that it is prepared from copra dried in the sun. For this we do not as yet have the answer, as we have not demonstrated that coconut oil or copra can be activated in the sun; but we have shown that rations containing other constituents can be activated by such an exposure, which lends support to our hypothesis.

The number of food materials that can be made antirachitic by simply exposing them to light is far from being limited. It is a property quite common to foods of both plant and animal origin. In fact, one would almost be led to assume that it is a universal characteristic, but such is not the case. We have been very successful with such diverse materials as wheat, Indian corn, yeast, cream of wheat, crude casein, hominy, rolled oats, cornstarch, patent wheat flour, shredded wheat biscuits (Fig. 2), meat, milk, egg yolk, butter and liver. In spite of this we are inclined to the belief that only a comparatively limited number of *pure* compounds can be affected in this manner.

Our attention was first drawn to the nature of the compounds artificially activated by light when we concerned ourselves with proving the identity of this activation with that existent in cod liver oil. It was known, as the result of work carried out in this laboratory,[13] as well as in other laboratories,[14] that the antirachitic principle of cod liver oil is entirely stable to saponification; in other words, this oil can be boiled up with strong alkali so as to destroy the fats completely and the antirachitic potency is left intact. Experimental trials showed that a similar treatment of irradiated olive oil also resulted in a product unimpaired in activity.[15] This clearly established the fact that the compounds in the group of unsaponifiable substances isolated from fats merited intensive study.

We had long appreciated this fact; but, believing that it could not be cholesterol, because it had been shown in this laboratory that the glucosid digitonin could not precipitate the antirachitic activity from the unsaponifiable fraction of cod liver oil,[16] we did not give it much attention. In fact, we were rather hesitant in attacking this fraction at the expense of time devoted to other phases of the problem, because these lipoidal substances do not readily lend themselves to fractional separation and purification. Fortunately, seven months after our original discovery, that is, in June, 1924, we took some cholesterol prepared from brain and irradiated this in ether solution with the radiations from our quartz mercury vapor lamp, and found that it, too, was readily activated. Further trials have rendered it very improbable that such activity was resident in any contaminating substance, because highly purified cholesterol—purified by recrystallization from eight to ten times from alcohol and then as the benzoate and acetate, from which it was subsequently recovered after saponification—was active in very small doses after irradiation.[17] Apparently it takes only slightly more than 0.01 per cent. of the ration as irradiated cholesterol to calcify the rachitic bones of our experimental rats in the short interval of ten days.

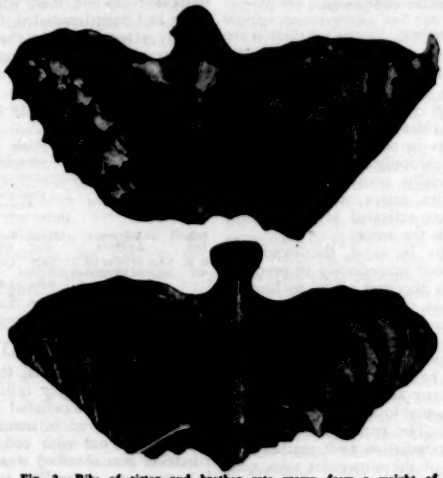

Fig. 2.—Ribs of sister and brother rats grown from a weight of 62 gm. to 90 and 92 gm., respectively, in five weeks. They had both been fed a ration consisting of shredded wheat biscuits, 33; yellow corn, 33; wheat gluten, 15; gelatin, 15; calcium carbonate, 3, and sodium chlorid, 1, during this period; but, in the case of the rat in the lower illustration, the shredded wheat of the ration had previously been exposed in a finely ground condition to the radiations of a quartz mercury vapor lamp at a distance of 2 feet for thirty minutes. Attention is called to the difference in the size of the costochondral junctions showing that irradiation of the ration prevented rickets. Histologic examination of the epiphyseal lines of the long bones confirmed the diagnosis.

The fact that cholesterol can be activated in one sense does not clarify the situation completely, because we are still confronted with the fact that there are other compounds in cod liver oil which carry this activity, and, furthermore, we,[16] as well as Zucker, Pappenheimer and Barnett,[14] have actually isolated cholesterol from cod liver oil and found it inactive. In the plant kingdom we must also look for other substances, because cholesterol is not found in plants. Here attention is immediately drawn to the phytosterols, which are closely related to the sterols of animal origin. In fact, it has been asserted that the animal is dependent on plants for the precursors from which it manufactures its cholesterol. So far in our experiments we have isolated phytosterol from corn oil and have not only found it inactive but have been unable to activate it by exposure to light. The explanation may lie in the fact that this phytosterol was prepared from an old corn oil that was decidedly rancid, but then we are forced to the assumption that a chemical change of but very slight magnitude may make activation impossible. A melting point determination gave us no indication of the presence of impurities. Other preparations of phytosterol were readily activated. This matter is a most interesting one for future study.

When we first found that irradiated animals put into the same cages with nonirradiated animals were

13. Steenbock, Harry; Jones, J. H., and Hart, E. B.: J. Biol. Chem. **58**: 383 (Dec.) 1923.
14. Zucker, T. F.; Pappenheimer, A. M., and Barnett, M.: Proc. Soc. Exper. Biol. & Med. **19**: 167, 1921-1922.
15. Steenbock, Black and Nelson: (Footnote 11).
16. Nelson, E. M., and Steenbock, Harry: Unpublished data.
17. Steenbock, Harry; Black, A.; Nelson, E. M.; Nelson, M. T., and Hoppert, C. A.: Proc. Am. Soc. Biol. Chem., Washington, D. C., Dec. 30, 1924.

able to influence the growth and calcification of the bones of the latter, we immediately suspected that the irradiated animals were giving off secondary invisible radiations as the result of their exposure to light. It apparently has been the experience of Kugelmass and McQuarrie [18] to demonstrate that cod liver oil and other antirachitic agents give off such radiations when oxidized. While their work is very suggestive, such a demonstration is fraught with difficulties, and, furthermore, it has not as yet been shown that these radiations are antirachitic in action. There obtains the possibility that this matter of giving off such radiations and the possession of antirachitic potency may be a mere coincidence and not be related. However, the theory that they are related looks exceedingly attractive, and in the event that such is proved to be the case, we shall be obliged to look on antirachitic action as being due to the introduction of a special form of energy rather than a particular compound.

COMMENT

The fact that light can impart antirachitic properties to certain compounds furnishes the explanation as to how it is that light acting directly on the body and cod liver oil taken by mouth can have the same action in preventing rickets. Evidently, when light acts directly on the body, it acts in part by virtue of the fact that it activates antirachitically certain substances already present. Superficially considered, it thus becomes immaterial whether active compounds are ingested or whether they are activated after they are absorbed. The end-result is the same.

With the foregoing facts in mind, the inquiring medical practitioner is inclined immediately to propose a number of questions. In the first place, to him it seems most unexpected that the antirachitic activity should not be more generally distributed in foods ingested by man and beast, because plant materials can be produced only in the light by photosynthetic activity. This is probably, however, no more peculiar than that rickets should occur at all, because just as foods are activated by exposure to light, it, too, yields directly to light treatment. The explanation is to be found in the fact that solar radiation as it reaches the earth does not carry much of the ultraviolet rays, and it is only light found in this region of the spectrum that is active in this capacity. Furthermore, this light has but very little penetrating ability, so that plants, unprovided as they are with any system for the translocation of lipoids, cannot be affected to a high degree.

The second question, which is not so easily answered, is: What is going to be the future for the use of irradiated foods and highly purified organic compounds? The answer to this can be anticipated on the basis of what is now known in regard to the effect of light of the proper wave length on various diseases. Of the possibility of their use in rickets, there remains no question; and it is not to be forgotten that rickets is only one of a number of forms of disturbed calcium relations. It has already been shown by extensive work with mature lactating goats, by Hart, Steenbock, and Elvehjem,[19] that excessive impoverishment of the mother's reserve of calcium salts during lactation can be prevented by radiant energy. It is also generally recognized now that, besides rickets, certain forms of tuberculosis yield readily to irradiation with ultraviolet light, and from time to time reports of the favorable influence of light on certain anemias make their appearance in the literature. Without doubt, some of the effects of direct irradiation will be found impossible of duplication by pharmacotherapeutic means; but, on the other hand, some effects may probably be secured not only to a more intense degree but with more safety to the patient.

That the beneficial results obtained in our animal work can be duplicated in man is shown by the table, which presents results obtained with the use of irradiated olive oil as an antirachitic agent for infants.[20] Following the technic of a previous communication,[21] two infants, one (R. R.) 5 months old and the other (W. C.) 3 months old were given, in addition to their diets of milk, dextrimaltose and lactose, 5 c.c. of the oil daily. After a preliminary period of at least three days, calcium balances were obtained, first with the untreated oil and then with the irradiated oil. The latter had been irradiated, May 16, 1924, and was used shortly afterward. At that time, we used ultraviolet light produced by a Cooper Hewitt BY type of lamp, run at about 80 volts. The oil was exposed in a thin layer of about one-eighth inch in thickness, at a distance of 2 feet, for thirty minutes.

Results from Feeding Plain and Irradiated Olive Oil to Nonrachitic Infants

Subject	Dietary Addition	Calcium Oxid Excretion: Urine, Gm.	Calcium Oxid Excretion: Feces, Gm.	Calcium Oxid Excretion: Total, Gm.	Calcium Oxid Intake, Gm.	Calcium Oxid Retention: Total, Gm.	Calcium Oxid Retention: Daily, Gm.	Calcium Oxid Retention: Per Kg., Gm.
R. R.	5 c.c. of olive oil...	0.319	2.244	2.562	3.444	0.882	0.294	0.047
	5 c.c. of irradiated olive oil.....	0.294	1.981	2.275	3.444	1.169	0.389	0.061
W. C.	5 c.c. of olive oil...	0.142	1.982	2.124	3.216	1.092	0.364	0.059
	5 c.c. of irradiated olive oil.....	0.165	1.810	1.975	3.216	1.239	0.412	0.065

As seen in the table, the calcium balance of both infants was favorably influenced. The magnitude of the effect of the irradiated oil is of the same order that has been observed in numerous other experiments of ours carried out with cod liver oil. That any effect whatever was obtained was rather remarkable, as both infants were, according to all external appearances, normal, and therefore a response was not necessarily expected.

The activity induced by light in inactive oils is a perfectly stable property. Our last tests, carried out in December, showed that olive oil exposed eight months previously and kept in a stoppered bottle in the dark had not lost any of its activity.[17] At the same time, Hess [22] reported that oils exposed by him six months before were still active.

It is by no means to be assumed that in infant feeding the probable use of artificially activated foods will be restricted to oils. We have succeeded in increasing the antirachitic potency of milk and egg yolk from ten to twenty times by irradiation. Milk, as is well known, is usually low in antirachitic properties; and egg yolk, ordinarily fairly rich in it, is already being used as a corrective adjuvant without further treatment. However, if an increasing amount of emphasis is to be put on the consumption of foods containing

18. Kugelmass, I. M., and McQuarrie, I.: Science **60**:272, 1924.
19. Hart, E. B.; Steenbock, H., and Elvehjem, C. A.: J. Biol. Chem. **62**:117 (Nov.) 1924.
20. These experiments will be reported in detail in another publication.
21. Daniels, Amy L., and Stearns, Genevieve: J. Biol. Chem. **61**:225 (Aug.) 1924.
22. Hess, A. F.: Proc. Am. Soc. Biol. Chem., Washington, D. C., Dec. 30, 1924.

large amounts of sterols, activated or not, or if sterols are to be used as such, it becomes an increasingly important matter to know more of their relation to cholelithiasis and atheroma.

At all events, it appears certain that the induction of special physiologic properties in naturally occurring, and synthetic compounds by their exposure to light is a principle that will have its application in nutrition as well as in pharmacology. The extent of its use remains to be determined by further research.

SUMMARY

By exposing such food materials as wheat, rolled oats, corn, hominy, cream of wheat, shredded wheat biscuits, corn flakes, patent wheat flour, cornstarch, meat, milk and egg yolk to ultraviolet light, they can be endowed with rickets preventing properties. That such a wide variety of foods can be thus affected appears to be due to the fact that practically all naturally occurring foods contain lipoidal constituents of the nature of sterols which can carry this activation. Cholesterol, for example, as obtained from brain is entirely inactive, but after exposure to ultraviolet light becomes rickets preventing.

As fats are good solvents for these lipoids, practically all fresh fats, such as butter fat, olive oil, lard, corn oil, coconut oil and cottonseed oil, can be activated, often to a degree to make them compare favorably with cod liver oil. As antirachitic action consists in the induction of calcium assimilation and its conservation for the animal, this is a matter which concerns not only the young but also the adult.

It is suggested that these findings may have their significance not only in nutrition, but also in the therapy of those diseases known to respond to irradiation with ultraviolet light.

TREATMENT OF PARESIS

RESULTS OF INOCULATION WITH THE ORGANISM OF BENIGN TERTIAN MALARIA *

WATSON W. ELDRIDGE, M.D.

AND A COMMITTEE CONSISTING OF JOHN E. LIND, M.D.; SAMUEL A. SILK, M.D., AND P. J. TRENTZSCH, M.D.

WASHINGTON, D. C.

The stimulation of interest in the treatment of paresis, through the work of Professor Wagner-Jauregg and others by the experimental use of malarial inoculation, led Dr. William A. White, superintendent of St. Elizabeth's Hospital, to have this mode of treatment tried at this institution. Professor Wagner-Jauregg had noticed as far back as 1887 that paretic patients had a tendency to improve following attacks of intercurrent infectious disease, and since that time had made various attempts to produce an analogous condition artificially, in the hope of obtaining the same end-result, and finally, because it could be definitely controlled, he selected the organism of benign tertian malaria for this purpose. Since his first work along this line others have made similar attempts, and reports made by Weygandt, Redlich, Mühlens, Dattner, Plehn, McAlister, Grant and contemporaries indicate a widely varying opinion as to its efficacy and general practicability. Dr. Nolan D. C. Lewis of this hospital has collected an extensive bibliography and made a rather comprehensive summary of this work, which was incorporated in his paper read before the meeting of the American Psychiatric Association in Atlantic City in June of last year.

The value of any report on experimental work of this type consists to a large extent of the interest it stimulates in others to repeat it, not only in the hope of accomplishing an end as encouraging as that reported by the original experimenter, but also for the purpose of "checking" the original work, so to speak; for it is recognized that interpretation of the clinical condition of the patient and of the effect of any kind of treatment brings in the personal equation. This has been aptly stated by Solomon: [1]

> For practical purposes the most important consideration always is the clinical condition of the patient. Unfortunately, however, the interpretation of the clinical state is a matter that brings in the personal equation. Especially is this true in syphilis of the nervous system, in which the condition is chronic, the progress is often extremely slow, there are spontaneous improvements, and the symptomatology is such that one is easily led astray. A period of years is necessary before one can be relatively or absolutely sure that he is not misinterpreting slight remissions as arrest.

With this in view a committee [2] was appointed by Dr. White, Dec. 1, 1922, for the purpose of making an individual examination and survey of each paretic patient whose family had given the hospital written permission to undertake the malarial treatment. The committee wrote to the family of each of a large number of paretic patients, explaining the nature and status of the treatment to be undertaken and requesting a written expression of opinion regarding their desire in the matter. As a result of this, we obtained permission to treat sixty-eight patients.

The committee then held meetings at stated intervals, and a stenographer was present to take down the opinions of the committee members, as expressed, in regard to the result of the examination of each patient. We decided at the beginning that we would express each patient's neurologic condition, serologic report and mental condition separately, and that the condition in each of these spheres should be expressed in symbols indicating approximately the degree of departure from the normal; thus, with regard to the neurologic condition. A indicates nearly if not quite normal; B, abnormal to a partial extent, that some of the reflexes were moderately affected, but that the condition was not advanced; C, typical of advanced paresis. So also in regard to the serologic findings, and lastly in regard to the mental condition. In order to be able to render a somewhat finer distinction relative to the degree of abnormality in each sphere than the three symbols A, B and C would allow, we decided to use the signs for plus and minus in connection with the letters. Thus, B — indicates a condition not quite as advanced as B but more advanced than A or A +. B + indicates a condition more advanced than B but not quite so far advanced as C — or C; and so on.

At each meeting of the committee, about ten patients were examined. Each patient's condition was discussed in detail, and a record was made before the next patient was examined.

It was decided at the first meeting that the final report would consist of a tabulation showing the condition of

* Owing to lack of space, the full reports of only a few of the cases on which this article is based are presented here. The remainder of the cases are reported in abstract.

1. Solomon, H. C., and Vieta, H. R.: A Comparison of Tryparsamide and Other Drugs in Treatment of Neurosyphilis, J. A. M. A. 83: 891 (Sept. 20) 1924.

2. The committee consisted of Dr. Watson W. Eldridge, chairman, and Drs. John E. Lind, Samuel A. Silk and J. P. Trentzsch.

each patient on his admission to the hospital, his condition just prior to the beginning of the malarial treatment, and his condition one year or more after the completion of the treatment.

In order to make this tabulation of uniform style, it was necessary to form an opinion of the patient's admission condition from the clinical records. These were, however, very complete in practically all cases, only two, Cases 65 and 33, presenting any difficulty in this regard.

An inquiry was made into the history of each case as to a possible previous infection of malaria. In only six cases was this history positive. In three of these cases the infection had received prompt treatment, but no history could be obtained concerning the type or time of treatment in the other three. In the remainder of the cases, no information could be obtained as to whether or not a previous malarial attack had been suffered. In four of the cases in which there had been malaria, the infection had occurred before the initial lesion of syphilis had appeared, but in the other two it followed the syphilitic infection by some years.

The general condition of the patients selected for treatment was considered, with the idea at first of eliminating those that appeared to be poor risks, but we finally determined to inoculate all the patients in order to determine the effect of the treatment in cases of every degree of deterioration, with the thought in mind, of course, of the hopelessness of their future status anyhow, without treatment. Of the sixty-eight patients selected, fifty-six were considered to be in sufficiently good physical condition to constitute a good risk, and twelve were recognized to be in such poor physical condition as to constitute a poor risk. Of those considered good risks, sixteen are improved, twenty show no change, twelve have deteriorated, six have died, and we have no information in regard to two. Of the poor risks, two are improved, one shows no change, one has deteriorated, seven have died, and we have no information regarding one.

In the cases selected, the matter of previous antisyphilitic treatment was also considered, and the result of this phase of the matter is as follows: Twenty-seven patients received antisyphilitic medication before

TABLE 1.—*Patients Receiving Other Than the Malaria Treatment Alone, and Comparative Result Obtained*

Result	No. of Cases	Before Malaria		After Malaria		No Other Treatment	Failure of Malaria Inoculation
		Other Treatment	No Other Treatment	Other Treatment	No Other Treatment		
Improved	16	16	2	11	7	1	0
No change	21	13	8	6	15	6	4
Deteriorated	13	11	2	4	9	1	2
Died	13	7	6	1	12	6	4
No information	3	..	..	..	..	..	..
Totals	68	47	18	22	43	16	10

malarial treatment; three received antisyphilitic medication after malarial treatment; twenty-two received medication both before and after treatment, and sixteen received no other treatment than the malarial. Those of the first group received arsphenamin usually. Some were also given injections of mercurial (gray) oil, and one received silver arsphenamin. Six had, in addition to their courses of arsphenamin, one or two courses of treatment by the Swift-Ellis method. The patients of the second group all received sulpharsphenamin. Those of the third group received, after their malarial treatment, sulpharsphenamin, as a rule. A few received arsphenamin, and one received ten injections of tryparsamide. Their treatment before the malarial inoculation was practically the same as that of the first group. All medication and the malarial inoculations were given by the hospital syphilologist Dr. Herman P. Hyder. The tabulated comparison of results with relation to previous treatment is shown in Table 1.

No difficulty was experienced in obtaining a case of malaria in which there was infection with a pure strain of the benign tertian parasite. This was accomplished

TABLE 2.—*Comparative Result in the Various Types of Cases Previously Selected and Classified According to Condition*

Result	A Cases	B Cases	C Cases	Atypical Cases	Total No. of Cases
Improved	1	10	6	1	18
No change	3	13	3	4	23
Deteriorated	0	0	4	0	13
Fatal	1	6	6	0	13
No information	1	1	1	0	3
Totals	5	29	19	5	68

through the cooperation and courtesy of the authorities in charge of the U. S. Naval Hospital, Washington, D. C. The patient had a negative Wassermann reaction and had no syphilitic history.

Inoculation was accomplished by injecting into the subscapular connective tissue, by means of a Luer hypodermic syringe, about 2 c.c. of blood withdrawn from the donor patient shortly after a paroxysm. The recipients were then sent to one ward, which was well screened, and confined there until their treatment was complete, and we were sure that they were parasite free.

The periods required for incubation varied widely, the shortest being seven days and the longest thirty-four, and these periods seemed to bear no relation to the patient's condition or to any other factor that we could ascertain. It was thought desirable to let each patient have sixteen or eighteen paroxysms, and this was done in all cases which did not subside without medication and in which the physical condition would permit it.

When the required number of paroxysms had been manifested, quinin sulphate was administered by mouth. The first dose consisted of 10 grains (0.65 gm.), and thereafter 5 grains (0.3 gm.) was given three times a day for the ensuing ten days, or until the patient showed some sign of quinin toxemia. In only two cases was there any recurrence of the paroxysms. One occurred two months and one three months after the quinin administration, and both responded immediately when quinin was given again. There has been no repetition of these recurrences in these two cases. There were a number of cases in which the paroxysms subsided spontaneously and in which no quinin was administered. There had been no recurrence in these cases, and a few of these patients, having had only a few paroxysms, were subjected to reinoculation, but without result.

Permission for necropsy could be obtained in only three of the cases in which the patient died. The necropsies were performed by Dr. Nolan D. C. Lewis, and were reported by him in great detail in the paper previously mentioned. Brief abstracts of six of the sixty-eight cases are given below.

Table 2 shows the comparative result in the various types of cases previously selected and classified according to their condition. It will be noticed that certain of the columns in this table are headed A cases, B cases, C cases and atypical cases. The A cases consist of those in which the predominating picture of degree of deterioration, or departure from the normal, was at the highest level; the B cases of a medium level, and the C cases at a greatly deteriorated level. While this consolidation of the symbols of the three spheres examined, and explained above, does not lend itself to entire accuracy, nevertheless it enables us to make a readable tabulation, which, in general, is correct and from which information may be had and deduction made at a glance.

In order that the facts with regard to the malarial history of the treatment period may be correlated to the result obtained, Tables 3, 4, 5 and 6 have been compiled.

TABLE 3.—*Malarial History of Improved Cases*

Case	Incubation Period in Days	Number of Paroxysms	Average Maximum Temperature, F.	Type of Infection*	Method of Termination of Malaria †
4.....	7	15	103.8	T.	A
5.....	8	14	103.4	D. T.	S
12 ‡.....	17	9	103.5	D. T.	S
13.....	20	11	104.7	Irreg.	S
19.....	20	13	102.8	D. T.	A
28.....	12	16	104.3	T.	A
34.....	25	15	104.4	D. T.	A
35.....	18	17	104.2	D. T.	A
37.....	19	15	103.9	T.	A
47.....	17	18	103.5	D. T.	A
43.....	14	15	103	D. T.	A
44.....	20	4	105.1	T.	S
45.....	12	14	103	Irreg.	S
60.....	13	17	103.5	D. T.	A
62.....	10	16	104.5	D. T.	A
63.....	14	14	103.7	D. T.	A
66.....	11	15	103.9	D. T.	A
67.....	19	10	103.1	D. T.	A
Average §	14.5	14	103.8		

* T, tertian infection; D. T., double tertian infection; Irreg., irregular temperature and paroxysms, not characteristic of any type of infection.

† A, paroxysms aborted by the administration of quinin; S, paroxysms subsided without any medication.

‡ Recurrence of malaria two months later.

§ In determining averages, inoculation failures are not considerd.

TABLE 4.—*Malarial History of Cases in Which No Change Occurred*

Case	Incubation Period in Days	Number of Paroxysms	Average Maximum Temperature, F.	Type of Infection	Method of Termination of Malaria
46.....	9	13	104.3	D. T.	S
47.....	Inoculation failure.		No paroxysms		
49.....	Inoculation failure.		No paroxysms		
11.....	Inoculation failure.		No paroxysms		
29.....	Inoculation failure.		No paroxysms		
53.....	21	15	104.2	T.	A
56.....	12	13	103.8	D. T.	S
57.....	11	16	104.3	D. T.	A
58.....	10	14	103.2	Irreg.	S
59.....	10	15	105	D. T.	A
60.....	14	16	104.3	D. T.	A
61.....	20	15	104.9	Irreg.	A
64.....	20	18	103.5	D. T.	A
65.....	16	16	104	D. T.	A
2.....	9	15	104.9	T.	A
6.....	8	15	104	D. T.	A
7.....	11	15	104.3	D. T.	A
8.....	18	15	102.6	T.	A
18.....	10	14	103.2	Irreg.	A
20.....	8	15	104	T.	A
21.....	9	15	104.5	D. T.	A
Average	12.7	15	104.2		

A careful perusal of the six tables presented and of the case histories appended would seem to lead to the conclusion that improvement or arrest, if such it can be called, of paretic patients treated by the method of malarial inoculation, does not bear any relation to the patient's previous condition, to other treatment that he may have had, to the manner in which he reacts to the malarial inoculation or to any other single factor that can within reason be considered.

As inoculation failed in ten of the cases, it is obvious that this number should not be taken into consideration in arriving at a percentage conclusion with regard to the final outcome of treated cases.

TABLE 5.—*Malarial History of Deteriorated Cases*

Case	Incubation Period in Days	Number of Paroxysms	Average Maximum Temperature, F.	Type of Infection	Method of Termination of Malaria
1.....	2	7	103.6	Irreg.	S
3.....	10	17	104.2	D. T.	A
9.....	18	1	104	?	S
17.....	20	14	102.4	D. T.	A
17.....	12	10	104.3	Irreg.	S
29.....	12	12	104.1	T.	A
32.....	31	15	102.6	Irreg.	A
33.....	21	15	104.2	Irreg.	A
36.....	15	5	103.2	Irreg.	S
48.....	Inoculation failure.		No paroxysms		
50.....	Inoculation failure.		No paroxysms		
54.....	12	19	104.5	D. T.	A
27.....	16	3	104.2	T.	S
Average	14.3	10.8	103.7		

TABLE 6.—*Malarial History of Patients Who Died*

Case	Incubation Period in Days	Number of Paroxysms	Average Maximum Temperature, F.	Type of Infection	Method of Termination of Malaria	Time of Death After Treatment, Weeks
14.....	19	9	103.1	T.	S	29
20.....	10	3	104.8	T.	S	2
21.....	9	1	105.6	?	S	2
22.....	17	3	102.4	D. T.	A	4
23.....	10	15	104.3	D. T.	A	5
25.....	15	8	104.8	D. T.	A	20
40.....	17	13	104.8	D. T.	A	32
41.....	34	3	104.9	Irreg.	S	20
51.....	16	14	104.5	D. T.	S	24
68.....	Inoculation failure.		No paroxysms	..	..	4
39.....	Inoculation failure.		No paroxysms	..	..	10
26.....	Inoculation failure.		No paroxysms	..	..	2
24.....	Inoculation failure.		No paroxysms	..	..	2
Average....	16.3	7.5	104.4	....	..	17.3

The same disposition should be made of the three cases concerning which we have no information. This then leaves fifty-five cases for final consideration. Of this number, eighteen, or 32.7 per cent. of the patients, are improved at the end of a year after the completion of their treatment. Twenty-one, or 38.1 per cent., show no change, which may or may not mean a permanent arrest. Thirteen, or 23.6 per cent., show definite further deterioration, demonstrating the ineffectiveness of the experiment in this group. The same number died, several, however, of intercurrent disease, so that the entire number of deaths cannot be attributed to paresis, except that it probably can be blamed for having made it possible in some cases for the intercurrent disease to intrude.

It has been reported by some of those who have experimented in this field that improvement occurred oftener and to a greater degree in those cases which presented least clinical evidence of the disease, or the early cases, at the time of treatment. This is not borne out in our experience. Of the A cases, only one patient improved, while two showed no change, and one died. Of the eighteen improved patients, only one was in the A group; ten were in the B group and six were in the C group. Throughout the entire series, both the relative number and the percentage of B cases were greater in the improved and in the arrested groups. They also predominated in the deteriorated group, in actual number, but not in relative number or percentage.

As for the clinical course of the malarial infection, it is interesting to note that thirty cases presented a double tertian periodicity, twelve a pure single tertian periodicity, and eleven a periodicity of such irregularity that it could not be interpreted. Of the double tertian cases, twelve appear in the improved group, ten in the arrested group and three in the deteriorated group. Five patients died. Of the single tertian cases, four are in the improved group, four in the arrested group, two in the deteriorated group and two in those who died. Of the irregular cases, two are in the improved group, three in the arrested group, five in the deteriorated group and one in the group of those who died. What significance this may have is conjectural.

The average maximum temperature of the paroxysms differs little in the several groups, ranging only between the lowest 103.7 and the highest 104.4 F., the former in the deteriorated group and the latter in the group of those who died, so that this factor apparently had little if any effect on the outcome of the cases. The average total number of paroxysms was somewhat greater in the improved and arrested groups than in the other two, Tables 3, 4, 5 and 6 showing the number in the groups of improved, arrested, deteriorated and dead to be fourteen, fifteen, ten and seven, respectively. The figure given for the group of those patients who died can, however, hardly be given consideration in a fair comparison, since the paroxysms were purposely terminated early in these patients, owing to the serious physical condition which most of them soon developed.

Another angle of the course of the malaria to be considered is the comparison of the cases in which the paroxysms subsided spontaneously, and those which were terminated by quinin administration. Of the improved cases, thirteen had to be terminated by quinin and three subsided, while in four there were no paroxysms, owing to failure of the inoculation. Of the deteriorated cases, six were terminated by quinin and five subsided, while two were inoculation failures. Of the fatal cases, four were inoculation failures, five subsided and four were terminated by quinin. The quinin termination cases, therefore, were 72.2 per cent. of the improved group and 82.3 per cent. of the arrested group, whereas in the remaining two groups the cases of spontaneous subsidence predominated, being 54.5 and 55.6 per cent., respectively, for those in which there was deterioration and those which terminated fatally. In computing these percentages, the inoculation failures are of course not taken into consideration.

A summary of the study shows, therefore, that of the cases considered, 70.9 per cent. are either improved or arrested; or, to put it a little differently, this percentage of patients show either some improvement or no change in their pretreatment condition. This at first glance seems to constitute a rather encouraging result, bearing in mind that this report is the unanimous opinion of the four members of the board that conducted the experiment, and is, therefore, as nearly as possible free of the influence of the "personal equation" of any one individual. It is felt, however, by the committee members and by those who come in daily contact with the patients, that there is no warrant for an excessive optimism at this time. While the percentage of improved and apparently arrested cases is somewhat higher, in fact considerably higher, than is usual with untreated cases or cases treated with the usual methods, nevertheless, we feel it would be a mistake at this time to jump to too definite conclusions in the matter. The post-treatment period has been only a few months more than a year, and Solomon's comment pertaining to the extreme difficulty in always determining accurately the presence or absence of definite changes in cases of such chronicity as found in these patients is very timely in this connection and to be borne in mind.

A second group of cases is under treatment and observation, and will be reported next year. At the same time it is intended to make a subsequent report on the condition, at that time, of the cases here considered.

CASE 4.—W. B. gave no history of an initial lesion or of previous malarial infection. The patient was admitted two months before malaria treatment was started. At admission and on the pretreatment survey, his condition was classified as: neurologic, B; serologic, C; mental, B. He received no antisyphilitic medication prior to or following the malarial treatment. An incubation period of seven days was followed by fifteen moderately severe paroxysms of the pure tertian periodicity, which were terminated by quinin administration, with no recurrence. He was considered a good physical risk and remained in good physical condition during the malarial attack. Shortly after the termination of the malaria, he was transferred to another hospital and two months later was discharged. Two months after his discharge, he was able to return to his work, that of a mail clerk in the post office department. He returned to this hospital at our request for a resurvey, at which his condition was classified as: neurologic, B; serologic, B; mental, B. The serologic report was rendered by a private laboratory in Washington and transmitted by a physician in the city, who has been keeping in close touch with the patient. The resurvey indicates some improvement in the patient's condition, mostly observed, however, in the serologic findings.

CASE 7.—A. S. S. had had an initial lesion in 1903. There had been no previous malarial infection. He was admitted in 1923, a short time before being inoculated with the malarial organism. On admission and pretreatment surveys his condition was classified as: neurologic, B; serologic, A; mental, B. He received no antisyphilitic medication prior to or following his inoculation with malaria. From the standpoint of his physical condition he was considered a poor risk, and his condition was rather precarious during the course of the paroxysms. An incubation period of eleven days was followed by fifteen paroxysms of the double tertian periodicity, very severe in degree, with an average maximum temperature of 104.3 F. They were terminated by quinin administration. At a resurvey in June, 1924, his condition was classified as: neurologic, B; serologic, A; mental, B. He was placed in the atypical class because of the serologic reports. Neurologically and mentally he was a paretic patient, but his gold curve was never that of typical paresis. His condition remained unchanged one year after the malarial inoculation.

CASE 12.—F. M. O. had had an initial lesion, in 1900, but no previous malarial infection. He was admitted in 1921. On admission, his condition was classified as: neurologic, A; serologic, C; mental, B. He received fifty-nine injections of arsphenamin. At a pretreatment survey in May, 1923, his condition was classified as: neurologic, B; serologic, C; mental, B. After an incubation period of seventeen days, he had nine moderately severe paroxysms of the double tertian type, which then subsided without quinin administration. Quinin was then purposely omitted in order to determine whether or not there would be a recurrence. This followed two months later, and quinin was administered after the second paroxysm. After that time there was no recurrence. During the following year, no antisyphilitic medication was given, and at a resurvey, in June, 1924, his condition was classified as: neurologic, B—; serologic, C—; mental, B—. This shows a moderate improvement in all phases. The patient at present enjoys a full city parole and is in good physical condition. His mental condition is also very good.

CASE 13.—C. P. had had no initial lesion or prior malarial infection. He was admitted in 1921, and his condition was classified as: neurologic, A; serologic, C; mental, B. He received no antisyphilitic medication. He was considered a

good risk physically, and so proved to be. After an incubation period of twenty days he had eleven severe paroxysms, which then subsided without quinin administration. His average maximum temperature was 104.7 F. Quinin was then purposely omitted, and there was no recurrence of the malarial manifestations in over a year. His pretreatment resurvey was: neurologic condition, A+; serologic, C; mental, B. During the year following the malarial treatment he received thirteen injections of arsphenamin, and at a resurvey, in June, 1924, his condition was classified as: neurologic, A; serologic, B; mental, A+. This constitutes a moderate improvement in all phases.

CASE 19.—T. T. had had an initial lesion in 1899. There was no history of previous malarial infection. The patient was admitted in 1920, and has received 105 injections of arsphenamin, twenty of mercurial (gray) oil, and eighteen treatments by the Swift-Ellis method. At the admission survey, his condition was classified as: neurologic, B; serologic, B; mental, B. A resurvey in May, 1923, did not change this classification. After an incubation period of twenty days he had thirteen mild paroxysms of the double tertian type, with an average maximum temperature of 102.8 F., which were terminated by quinin administration. During the ensuing year, he had twenty-six injections of arsphenamin. A resurvey in June, 1924, left his classification as originally made, and he is tabulated with those in whom no change occurred. He is in fairly good mental and physical condition, and has returned to his home for the time being.

CASE 40.—A. B. had had no initial lesion or previous malarial infection. On admission, in 1922, his condition was classified as: neurologic, B.; serologic, C; mental, A+. He received ten arsphenamin injections, and on a resurvey, in May, 1923, his condition was classified as: neurologic, A; serologic, C; mental, A. This showed a moderate amount of improvement. He was considered a good risk, and proved so to be. After an incubation period of seventeen days he had thirteen severe paroxysms of double tertian periodicity, with an average maximum temperature of 104.8 F., which were terminated by quinin administration. During the ensuing year he received twelve injections of arsphenamin and nineteen of mercurial oil. In 1924, at a resurvey, his condition was classified as: neurologic, A; serologic, A; mental, A. This constituted a very marked improvement clinically and a normal serologic finding. Unfortunately, however, the patient shortly afterward manifested symptoms of pulmonary tuberculosis, and he went rapidly downhill and died of this disease, as proved by necropsy. Examination of the brain by Dr. Lewis showed an absence of exudate, and no spirochetes could be found. Dr. Lewis stated that the brain did not in any way resemble that of a paretic patient.

CONCLUSIONS

1. The malarial treatment of paresis apparently produces a larger percentage of improved and arrested cases than other methods of treatment.

2. This tentative conclusion can be verified only by a longer period of observation of the cases treated, and by the treatment of a larger number of cases.

3. Great care must be exercised in work on this type of cases to see that the effect of the personal equation of the worker is kept at a minimum.

4. This method of treatment, if proved effective, is easily controlled, and with ordinary hospital care should present no serious difficulty or constitute an unusual risk.

Food Value of Rice Pudding.—With a very large number of people it is an article of simple faith that rice pudding is wholesome and nutritious. It is nothing of the sort. It consists of decorticated rice, boiled milk and concentrated sucrose, a combination cunningly devised to exclude every vestige of vitamin, every particle of enzyme, and every trace of salts. It is naught but a concoction of indigestible and irritating carbohydrates.—Williams, Leonard: *Practitioner* 114:71 (Jan.) 1925.

THE EFFECT OF EPINEPHRIN BY ORAL ADMINISTRATION

PRELIMINARY REPORT *

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This study is based on a series of observations in the administration of epinephrin by mouth in various types of hyperthyroid cases. The original problem was to determine the possible effect of epinephrin administered by mouth in a group of patients known to be more sensitive to the drug than the normal person. It has suggested other problems with regard to the use of epinephrin in local anesthesia in hyperthyroid cases, the relation of metabolism and epinephrin hypersensitiveness, and the relation of various types of hyperthyroidism and epinephrin hypersensitiveness, all of which will be reported on at a later date.

Based on a large amount of experience in both clinical and experimental investigation, it has been generally found that epinephrin produced little or no effect by oral administration. Sollmann [1] states that "it is entirely ineffective by oral administration" and that "the blood pressure response is practically absent" when given by mouth. Useful Drugs [2] states that, "when given by mouth, it produces no evident effect on the general circulation." Cushny [3] states that "when given by mouth, it has no effect on the blood pressure or heart." According to the Pharmacology of Useful Drugs,[4] "epinephrin is one of the few alkaloids in the materia medica which are not absorbed from the gastrointestinal canal with such rapidity as to induce any appreciable effect." In the recent series of articles on glandular therapy in THE JOURNAL, it was stated,[5] regarding epinephrin, that "when the drug is administered by mouth, it is quickly destroyed, either by the gastric or by the intestinal secretions, and its systemic effects are consequently not obtained." All the references in the literature that could be found on the use of epinephrin by mouth were consulted, and in every instance, with one possible exception,[6] in which results were obtained, the solution of the drug was used, and the effects could be explained through local action on the mucous membranes of the mouth and throat.

The method used in the present series has been the same in all cases. The patient is kept resting in bed for at least twelve hours preceding the observation. Several control blood pressure and pulse readings are made before the drug is administered. Epinephrin (adrenalin tablets, Parke, Davis & Co.), in doses varying from to 2 to 5 mg., is administered in a gelatin capsule on an empty stomach, after which blood pressure and pulse readings are made at frequent intervals over a period of at least an hour and in one case five hours. In most of the cases, basal metabolism determinations were made, either previous to or subsequent to the administration of epinephrin.

* From the Second (Cornell) Division, Bellevue Hospital, New York.

1. Sollmann, Torald: A Manual of Pharmacology and Its Application to Therapeutics and Toxicology, Ed. 2, Philadelphia, W. B. Saunders Company, 1922, pp. 385, 387.
2. Useful Drugs, Prepared under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association, Chicago, American Medical Association, Ed. 6, 1923, p. 70.
3. Cushny, A. R.: A Textbook of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease, Ed. 7, Philadelphia, Lea and Febiger, 1918, p. 374.
4. Hatcher, R. A., and Wilbert, M. I.: Pharmacology of Useful Drugs, Chicago, American Medical Association, 1915, p. 189.
5. Wearn, J. T.: Glandular Therapy: Pharmacology of Epinephrin, J. A. M. A. 83:1508-1509 (Nov. 8) 1924.
6. Aschner, B., and Pisk, H.: Ist das Adrenalin vom Magen darmtrakt aus Wirksam? Klin. Wchnschr. 3:1265-1267 (July 8) 1924.

To date, a series of fourteen observations has been made on nine patients. Of this group, three have given a very definite and in one case a marked reaction, and two others have given slight reactions. Of the three cases in which the reaction was marked, the blood pressure rose (systolic) 30 mm. in one case, 50 mm. in the second, and 110 mm. in the third. The pulse remained practically constant in the first two, but increased 52 beats a minute in the third. In all three cases, epigastric and substernal pain and nausea occurred. Vomiting, sweating and increased tremor occurred in two cases. In the two cases giving slight reactions, the blood pressure (systolic) rose in one case 12 mm. with a pulse increase of 20, and 18 mm. in the second with a pulse increase of 10. In both cases, there was epigastric "burning" and distress. These reactions were slight and might be disregarded, excepting that control observations with smaller doses on the same patients produced no objective or subjective effects.

While the results in different cases vary somewhat, the data on only one case are given here to serve as an illustration:

W. W., a man, aged 45, who had been admitted to the hospital before, once with the diagnosis of chronic interstitial nephritis and the second time with the diagnosis of chronic valvular disease, had had exophthalmos and goiter for about three years. He was admitted with marked tremor, dyspnea, enlarged heart, and vomiting. The basal metabolism was plus 52.2. The blood pressure was 197 systolic and 112 diastolic.

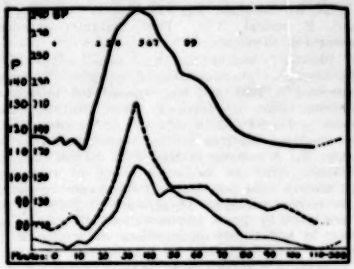
Observations Made Five Days Subsequent to Inferior Thyroid Artery Ligation

Time	Time Interval (Minutes)	Pulse	Blood Pressure: Systolic	Blood Pressure: Diastolic	Notes
8:45	..	80	184	98	
8:48	..	82	184	96	
8:54	..	78	178	94	
8:55	Epinephrin, 3 mg. tablets in gelatin capsule by mouth				
8:57	3	80	182	94	
9:00	5	80	176	90	
9:03	8	84	182	94	
9:05	10	80	176	96	
9:08	13	78	174	94	
9:13	18	84	212	104	Nausea
9:16	21	80	234	112	Abdominal "cramps"
9:19	24	..	..	..	Vomited
9:21	26	100	270	120	
9:30	35	132	290	160	
9:32	37	..	..	..	Glyceryl trinitrate, 1/50 grain
9:35	40	112	285	150	Severe precordial pain
9:39	44	104	268	134	
9:41	46	..	..	..	Vomited
9:44	49	96	254	140	
9:48	53	96	236	134	Marked tremor of hands
9:53	58	96	234	132	Sweating; severe pain
9:58	63	96	228	126	
10:05	70	90	204	116	
10:10	75	90	192	110	
10:15	80	90	186	100	
10:20	85	88	182	100	
10:25	90	86	180	100	
10:30	95	88	178	98	
10:45	110	80	176	90	
2:00	300	80	182	96	

The chart graphically sets forth the table of data. On the day following the observation, the patient subjectively felt better than at any time previously during his stay in the hospital. The pulse was 74, the lowest of any time while in the hospital.

Detailed discussion will be reserved till a further study in a larger series of cases has been made. There may be some relation between the metabolism and the effect here noted, but the results to date have not shown the effect to be uniformly proportional to the metabolic rate. Various types of hyperthyroidism with approximately equal metabolic rates do not give the same effect with oral administration. The group of "toxic" goiters seems to be more hypersensitive than other cases of hyperthyroidism, although their basal metabolic rates may be approximately equal.

The part played by the gastro-intestinal canal cannot be stated. The vomiting that occurred in the two cases is more suggestive of cardiac origin than of gastric. The pain is usually high in the epigastrium or substernal. In one instance, it was definitely precordial.



Effect of 3 mg. of epinephrin on the blood pressure and pulse, when administered by mouth in a capsule, in a case of hyperthyroidism (compare accompanying table): solid line, systolic; dotted line, diastolic; broken line, pulse; *B P*, blood pressure; *P*, pulse; 1, epinephrin administered; 2, vomited; nausea; 3, "cramps" began; 4, vomited; 5, spirit of glyceryl trinitrate administered; 6, vomited; 7, precordial pain, most severe; 8, marked tremor; 9, sweating.

CONCLUSION

At present, conservatively, the only conclusion to be made is that epinephrin may produce marked systemic effect on the circulation in some cases of hyperthyroidism when administered by mouth, the effect resulting from absorption through the gastro-intestinal canal and not from the mouth or throat.

QUANTITATIVE CHANGES IN HEPATIC GLYCOGEN IN ANAPHYLACTIC SHOCK

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Following our [1] demonstration that the giving off of toxic products by the liver is the physiologically dominant initial factor in canine anaphylaxis, we have begun a study of chemical changes in the canine liver during anaphylactic shock. Among other things, we have followed the changes in hepatic glycogen.

NORMAL LIVERS

The normal canine liver has a fairly constant glycogen content. Stained by Best's carmin method, the parenchyma is usually seen to be fairly well filled with red granules. The granules are usually largest and most numerous in the central portions of the hepatic lobules. Occasionally a narrow peripheral zone is free from granules.

Quantitative glycogen determinations were made by the official method adopted by the American Agricultural Chemists. From a 300 gm. normal canine liver,

1. Manwaring, W. H.; Hosepian, V. M.; O'Neill, F. I., and Moy, H. B.: Anaphylactic Hepatic Internal Secretion, J. A. M. A. 83:1494 (Nov. 8) 1924.

from 16 to 20 gm. of glycogen could usually be isolated by this method, after fifteen minutes' ether anesthesia.

SHOCK LIVERS

Livers were removed from dogs at various stages during the first fifteen minutes of typical anaphylactic shock (kymograph control, ether anesthesia). Microscopically, glycogen was seen practically to disappear from the livers by the end of fifteen minutes. The granules disappear first from the central portions of the hepatic lobules, the centers often becoming microscopically glycogen-free by the end of three minutes.

Chemical analyses confirmed these findings. In no case could more than 1 or 2 mg. of glycogen be isolated from a shock liver at the end of fifteen minutes.

SUMMARY AND CONCLUSIONS

Glycogen disappears almost quantitatively from the canine liver during the first fifteen minutes of anaphylactic shock.

No conclusion is as yet drawn as to the mechanism of this hepatic glycogen disappearance, nor as to its clinical significance. Our observation is in line, however, with the initial hyperglycemia in guinea-pig anaphylaxis, recently reported by Zunz and La Barre.[2]

DIETARY CONTROL OF NEPHRITIS

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In recent years, many articles have been published on dietaries in nephritis, diabetes, gastric and duodenal ulcer, and other diseases. A keen appreciation of the pathologic aspects of the disease in question has been shown in these papers, together with an earnest desire to work out a dietary plan that would aid most efficiently in controlling whatever chemical or physiologic abnormality was present. The authors of most of these articles have been physicians who have tried out these methods with more or less success in their private practice. Many of the recommendations made, however, are subject to criticism, in that they fail to recognize the fundamental principles of normal nutrition as established by the recent discoveries in this field.

People who need special advice on food are few in number in comparison with those who should be eating a normal, well balanced diet. Modern principles of normal nutrition are based on scientific research through animal experimentation—a method that has been responsible for phenomenal progress in many fields of biologic science, including medicine and surgery. Those foodstuffs found essential to the adequate nutrition of experimental animals have been conclusively shown to be equally necessary to man, regardless of age, sex, race or living conditions. It has also been demonstrated, repeatedly, that it is possible to provide these essential food constituents on a small income as well as on a liberal one, and that meals are most attractive, both esthetically and gastronomically, when well balanced. Special diets should be merely modifications of normal diets, adjusted to suit the needs of the person concerned, and his ability to assimilate and metabolize the food and to excrete its waste products. A person with a chronic illness who is on a special diet usually lives with or associates with people who are on normal diets. He will be more apt to adhere to his special diet if it is merely a modification of the diet of his family and friends. An attempt will be made in this paper to present the subject of diet in nephritis with these principles in mind and with a full knowledge of the medical problems involved in the selection of food in such a disease.

AIMS IN THE TREATMENT OF NEPHRITIS

Our present knowledge in this field may be thus summarized:

A. Rest of kidney function:
   1. Removal of all foci of infection.
   2. Physical and mental rest.
   3. Definite dietary restrictions, adapted to individual cases:
      (*a*) The calory intake should be such as to produce and maintain a slight underweight condition.
      (*b*) Protein, sodium chlorid and fluid intakes should be suited to the ability of the patient to excrete them or their end-products satisfactorily.
      (*c*) The acid-base balance of the diet should be adjusted in order to produce a urine as slightly irritating to the damaged kidney as possible.

B. Removal of edema:
   1. This can usually be accomplished by individualized adjustment of the sodium chlorid and fluid intake, and by control of the degree of acidity of the urine.
   2. Keith, Barrier and Whelan[1] recommend the daily administration of 10 gm. of calcium chlorid as an aid in the elimination of sodium chlorid and in the consequent reduction of edema.
   3. Increasing elimination of water through other channels—skin (sweating), bowels (concentrated saline catharsis) and tapping (mechanical removal).

C. Preventing the formation and absorption of toxic products:
   1. Removing all foci of infection.
   2. Preventing the absorption of chemical toxins, such as mercury or lead salts, or by induced abortion in toxic pregnancies.
   3. Controlling unnecessary production of the end-products of protein metabolism, by restricting the intake of protein.
   4. Preventing the formation of too highly acid urines through regulation of diet.

D. Insuring the adequacy of the diet from the standpoint of the modern principles of nutrition. This is especially important when one considers that the diet must be adhered to indefinitely.

If attention must be paid to the quality of the protein in planning diets for normal healthy persons, how much more important is this factor whenever it is necessary to restrict the total intake of protein, as is so often the case in nephritis?

If calcium is a common deficiency in the diet of so-called well people, is this not likely to be true for nephritic patients as well, to say nothing of iron, iodin and other minerals?

If a healthy child or adult must have a regular supply of Vitamins A, B and C, ought not equal attention be given to this problem in dietotherapy, whenever the patient is on a restricted diet for periods longer than one or two weeks?

It is surprising how frequently all these points are neglected in medical literature. Fortunately, however, more and more physicians are publicly recognizing their

2. Zunz, E., and La Barre, J.: Apropos des variations du sucre libre du sucre protéidique et du l'acide lactique lors du choc anaphylactique chez le cobaye, Compt. rend. Soc. de biol. 91:121 (June 20) 1924.

1. Keith, N. M.; Barrier, C. W., and Whelan, Mary: The Treatment of Nephritis and Edema with Calcium, J. A. M. A. 83:666 (Aug. 30) 1924.

great importance and are eager for all the information available along these lines.

DIETARY LIMITATIONS IN NEPHRITIS

Recommendations made should always be carried out more strictly in acute nephritis than in chronic cases, and limitations adhered to more rigidly in young people who have acute or chronic nephritis than in old people similarly affected.

A. *Proteins.*—In general, the better the quality of the protein mixture in the diet, the smaller the amount needed for growth purposes and for maintaining nitrogen equilibrium. Proteins from animal sources—meat, fish, poultry, eggs, milk and cheese—are superior in quality to those found in cereals, legumes, fruits and vegetables. Not less than half the protein eaten should be of good quality.

Quantity: Two-thirds gram of protein per kilogram of body weight is usually considered the minimum on which a person can remain in nitrogen equilibrium indefinitely. This is possible, however, only if the quality of the protein intake is sufficiently good. A diet of two-thirds gram of protein per kilogram, all of which came from vegetables, fruits, cereals and legumes, would not regularly maintain a person in nitrogen balance.

It may be advisable, in some cases of acute nephritis, to give less than two-thirds gram of protein per kilogram. Such a procedure should not be kept up more than a week or ten days, as a rule. It does not ultimately save the kidney, for a certain amount of wear and tear on protein goes on as long as life lasts. Body protein will, in time, be called on to supply what is lacking in the food. Patients must be kept in nitrogen equilibrium.

Furthermore, a patient should not be kept indefinitely on a protein intake as low as two-thirds gram per kilogram, unless it is known that he is having difficulty excreting the end-products of protein metabolism, and that urea is accumulating in the blood. The normal urea content of the blood is from 20 to 40 mg. per hundred cubic centimeters. Concentrations over 50 mg. usually indicate retention of urea. In cases of urea retention in which the concentration of the blood urea does not fall on restriction of the protein intake alone, a low protein diet should not be kept up too long without trying other measures in addition.

If, as is usually true in nephritis, the question is chiefly one of how much protein, there is no real advantage of white meat, fish or poultry over red meats.

It is seldom advisable to give a nephritic patient more than 1 gm. of protein per kilogram of body weight. The average normal intake for adults is from 1 to 1.5 gm. per kilogram. There is scientific evidence that the regular use of a high protein diet by so-called well people may be a factor in the production of kidney lesions.[2]

B. *Carbohydrates, Fats and Calories.*—The only restrictions in the use of such foodstuffs is that the total calories should not go above the amount needed for the production and maintenance of a weight somewhat below average for the patient's age, height, sex and body build. There should also be judgment used in the selection of carbohydrate-rich foods, the preference being given to those that are base-forming, such as potatoes and other vegetables, and most fruits, over those that are acid-forming, such as cereals and a few of the fruits and vegetables. Some fruits and vegetables contain organic acids, such as benzoic and oxalic, which the body cells cannot use as fuel, as they can citric and malic acids. The use of foods containing the former acids thereby increases the acidity of the urine. They should be omitted from the diet of a nephritic patient.

C. *Fluid Restriction.*—Fluids include milk, water and other beverages, soups and similar liquids. The term does not include the water naturally incorporated in solid or semisolid foods.

In the early stages of acute nephritis, if the patient is edematous, fluids should be restricted to 1 quart. If no edema is present, 1½ quarts may be allowed. In chronic nephritis, the fluid intake may go up to 2 or even 2½ quarts, if edema is absent. If edema is present, not more than 1½ quarts should be allowed.

"There is no proof, to date, that the kidney has more difficulty excreting concentrated substances than very dilute ones." Why, then, give unlimited amounts of liquids when the kidneys cannot excrete them?

D. *Sodium Chlorid Restriction.*—Not all cases of edema are cases of salt retention, but all cases of salt retention are edematous. The degree of salt retention necessary is proportional to the amount of such edema.

1. Salt-free diets are reserved for very acute cases in which, for a week or ten days, the amount of food a patient eats may be disregarded. Such diets are not used in chronic cases, or in acute cases not accompanied by edema. They should not be used longer than two weeks. The reasons are that:

(*a*) The patient will not be able to eat enough food because of its extreme unpalatability.

(*b*) Persistent salt starvation may lead to another type of edema and prove fatal.

2. Salt-low diets are commonly used in chronic nephritis accompanied by edema, as well as in acute nephritis. If moderate amounts of salt are used in cooking, and if no salt-rich foods are used, and no salt added to food at the table, the average intake of sodium chlorid is from 5 to 6 gm. a day (8 ounces of milk contains approximately 0.5 gm. of sodium chlorid). If unsalted butter, salt-poor bread, and vegetables and meats boiled free of salt are used, according to O'Hare and Vickers,[3] the sodium chlorid intake may be as low as 2 gm. daily. If, in addition, distilled water is used altogether, the intake may be reduced as low as 0.5 gm. daily. In most cases of nephritis, it is wise to forbid the use of salted nuts, salt meats, salted crackers, salted butter and such foods.

E. *Diuretics and Stimulants.*—Tea, Coffee, and Alcohol: Young people with acute nephritis ought not to be allowed to use such substances. Very weak coffee or tea may be used occasionally. Old people, however, with either acute or chronic nephritis, need not be compelled to give them up entirely, provided they use them in moderation. The reason is that such people have become so accustomed to using them that prohibiting their use would result in a restlessness and dissatisfaction that would be far more injurious than their use.

In general, diuretics should be avoided when the kidneys are excreting water with difficulty. As has been said, "Why whip up a lame horse?"

F. *Condiments and Spices.*—These should be omitted from the diet because of a possible irritating effect on

2. Polvogt, L. M.; McCollum, E. V., and Simmonds, Nina: The Production of Kidney Lesions in Rats by Diets Defective Only in That They Contained Excessive Amounts of Proteins, Bull. Johns Hopkins Hosp. 34:168 (May) 1923. Newburgh, L. H.: The Production of Bright's Disease by Feeding High Protein Diets, Arch. Int. Med 24:359 (Oct.) 1919.

3. O'Hare, J. P., and Vickers, M. C.: Home Management of the Diet in Nephritis, J. A. M. A. 81:1606 (Nov. 10) 1923.

the kidney in excretion. Natural flavors of foods should be relied on.

G. *Acid-Base Balance of Food.*—The work along this line has been done chiefly by Sansum, Blatherwick, and Smith.[4] They contend that the elimination of excess acids produced by the regular use of the common acid-forming diets is injurious to renal tissue. They recommend paying special attention to the acid-base balance of the food selected, providing ample calories, sufficient bulk for regular bowel movement, adequate minerals and an abundant supply of vitamins.

They feel that urinary acidity can be reduced by diet, and that, as it is lowered, there is a fall in blood pressure, less shortness of breath, less dizziness, fewer headaches, and a decrease in casts and albumin in the urine. The figures used to express the acid-base values of the common foods in their paper are taken from the work of Sherman and Gettler.[5]

Sansum and Blatherwick have used the types of diets recommended in a whole series of ambulatory arterio-hypertension nephritic cases. These patients were not starved, but were maintained at nearly normal weight. Neither hydrotherapy nor vasodilator drugs nor catharsis was used, and fluids were not restricted. Sodium chlorid was eliminated in a few cases. They report excellent results in 90 per cent. of their cases.

They recommend reduction of cereals, meats, fish, poultry and eggs, the liberal use of most fruits and vegetables, and milk in adequate amounts. The required number of calories can then be made up with neutral fats, starches and sugars.

PROPOSED PLAN OF DIETARY CONTROL

The classification of foods given as an aid in planning nephritic diets is based on that recommended by O'Hare and Vickers.[3] The simplicity of their plan has appealed to many busy physicians. The size of the portions is exactly as given by them. A few additions are made—sweet potatoes, nuts, cheese, and various forms of milk. Some foods listed by them are omitted—cranberries, plums and prunes, because of their benzoic acid content, and rhubarb, because of its oxalic acid. There is considerable rearrangement of the various foods, to permit consideration of the quality of the protein and acid-base properties of foods, the vitamin content and the minerals. Then there is considerable information given with each grouping of foods, in order to aid physicians and patients in menu planning.

THE NEPHRITIC DIET

All tablespoons described below are "rounded."

Foods not listed below are not to be used.

One point means that the portion described contains 4 gm. of protein.

Two points means that the portion described contains 8 gm. of protein.

Salt or spices are not to be added to food at the table. One should learn to eat food with a moderate amount of salt used for seasoning.

Unsalted butter should be used.

The daily allowance of fluid is . . . pints.

The daily allowance of protein is . . . points.

GROUP 1 A.—The foods in this group contain 4 gm. of protein per portion. Each full portion counts 1 point. The protein that they contain is of very inferior quality. In addition, all the foods listed are acid-forming, which is another reason for their restricted use. When the number of points for the day is less than 10 points, not more than 1 point each day should come from these foods. If the protein allowance for the day is more than 10 points, not more than 2 points each day should come from such foods.

Foods in Group 1 A

Bread, white: 1 average slice	Cooked oatmeal: 2 tablespoonfuls
Bread, graham: 1 slice, average	Boiled rice: 3 tablespoonfuls
Uneeda biscuits: 5 crackers	Cornmeal mush: 4 tablespoonfuls
Shredded wheat: 1 biscuit	Cream of wheat: 6 tablespoonfuls
Graham crackers: 5 crackers	Farina: 6 tablespoonfuls
White flour, dry: ½ cup	Macaroni: 4½ tablespoonfuls
Canned corn: 2½ tablespoonfuls	

GROUP 1 B.—Each full portion contains 4 gm. of protein and counts 1 point. This protein is likewise of inferior quality, but the foods listed are all base-forming foods, and so may be used somewhat more liberally than those in Group 1 A. When the number of protein points for the day is less than 10, not more than 2 points may come from such foods. When the protein allowance for the day is more than 10 points, usually not more than 3 points should come from this list.

Foods in Group 1 B

Baked beans: 1 tablespoonful	Potato, creamed: 1 tablespoonful
Green peas: 2 tablespoonfuls	Potato, mashed: 1½ tablespoonfuls
Lima beans, boiled: 1½ tablespoonfuls	Potato, baked: 1 medium
Sweet potato, boiled: 1½ tablespoonfuls	Potato, boiled: 1 medium

The protein in nuts is of fairly good quality, and they are base-forming. Generally, however, the vegetables listed above would be given the preference in selecting the number of protein points from this group, because of their greater bulk, higher vitamin content and mineral content, and their more satisfying effect on the appetite. One ounce of shelled pecans is the equivalent of 1 point; of almost all other nuts, one-half ounce is the equivalent of 1 point.

GROUP 2 A.—Each full portion contains 8 gm. of protein and counts 2 points. This protein is of excellent quality, but the foods are all so strongly acid-forming that their use must be restricted. This group includes all the meats, fish and poultry. When the protein allowance for the day is less than 10 points, not more than half a portion of such food should be used daily, and preferably none. When the daily allowance is more than 10 points, not more than one full portion of such food should be used each day, and preferably one half. The amount depends on how high the protein allowance is.

Foods in Group 2 A

Lamb chop, broiled: ½ chop	Boiled mackerel: 1" by 1" by 1½"
Roast beef: 3" by 2" by ¼"	Boiled salmon: 1" by 1" by 1½"
Roast lamb: 3" by 2½" by ¼"	Smelts: ½" by 1" by 3"
Beef steak, broiled: 2" by 1" by 1"	Oysters: 7 eastern, average size
	Canned crabmeat: 2 tablespoonfuls
Roast chicken: 3" by 3" by ½"	Canned salmon: 1½ tablespoonfuls
Boiled haddock: 1" by 1" by 1½"	Canned shrimp: 6 small shrimp
Boiled cod: 1" by 1" by 1½"	Egg: 1 average size or 1½ tablespoonfuls, scrambled
Boiled halibut: 1" by 1" by 1½"	
Bacon, crisp: 6½ thin strips	

GROUP 2 B.—Each full portion likewise contains 8 gm. of protein and counts 2 points. This protein is also of superior quality. This group is of considerable importance to the patient with nephritis.

Milk, all forms, not condensed. One full glass, 8 ounces, counts 2 points.

Two full glasses at least should be used in some form or other by every nephritic patient; four, if possible. Besides its good quality protein, it is basic in reaction and is valuable for its lime content, as well as its vitamins.

Of unsweetened condensed milk, 3 ounces equals 2 points. Of dried whole milk, 1 ounce equals 2 points. Of dried skim milk, three-fourths ounce equals 2 points. Of thin, or commercial, cream, 10 ounces equals 2 points; 5 ounces equals 1 point. Of heavy, or whipping, cream, 12 ounces equals 2 points; 6 ounces equals 1 point. One full portion of cream cheese is a piece 1½ by 1½ inches. This is also a valuable article of food to the nephritic patient, because of its basic

4. Sansum, W. D.; Blatherwick, N. R., and Smith, Florence H.: The Use of Basic Diets in the Treatment of Nephritis, J. A. M. A. 81: 883 (Sept. 15) 1923. Blatherwick, N. R., and Long, M. Louise: Some Effects of Drinking Large Amounts of Orange Juice and Sour Milk, J. Biol. Chem. 55: 103 (July) 1922.

5. Sherman, H. C., and Gettler, A. O.: The Balance of Acid-Forming and Base-Forming Elements in Foods, and Its Relation to Ammonia Metabolism, J. Biol. Chem. 11: 323, 1912.

properties, its mineral and vitamin content, as well as its good quality protein. One full portion of cottage cheese equals 1 rounded tablespoonful or 1½ ounces. It is a very palatable form of cheese, especially when mixed with cream.

Group 3.—These foods all contain so little protein that there need be no restriction in their use. They are all basic in reaction, as well, which is a still further advantage. They are also valuable for their vitamin content and their bulk. Whenever possible, they should be served raw.

Foods in Group 3

(a) Vegetables:					
Asparagus	Cabbage	Carrots	Cauliflower	Celery	
Cucumbers	Lettuce	Mushrooms	String beans	Tomatoes	
Onions	Squash	Turnips	Rutabagas	Beets	
Spinach		Parsnips	Egg plant	Brussels sprouts	
(b) Fruits:					
Apples	Apricots	Blueberries	Cherries	Grapefruit	
Grapes	Cantaloup	Strawberries	Lemons	Oranges	
Peaches	Pears	Raspberries	Watermelon	Bananas	
Pineapple		Blackberries	Loganberries	Muskmelon	

Group 4.—These foods contain no protein and are neither acid-forming nor base-forming in metabolism, in nephritis. They may be used as desired, provided the diet is not overbalanced by their too liberal use, at the expense of vegetables and fruits.

The rest of the diet should be selected first, and then the desired calory intake may be filled up from such foods.

Foods in Group 4

Sugar	Syrup	Candy	Pure starches	Tapioca	Butter	Lard	
		Salad oils	Butter substitutes				

Butter is to be preferred, in general, to butter substitutes, because of its vitamin A content. Salad oils may be used as desired, provided the person is not gaining in weight too rapidly.

Natural syrups are more valuable in the diet than are sugars and candies.

Pure starches, such as cornstarch, should be used in thickening gravies, white sauces, soups, etc. in preference to flour or other cereals listed in Group 1 A.

ACCURACY OF THE DATA GIVEN

The sizes of the portions given in Groups 1 A, 1 B, 2 A and 2 B are small enough and the amount of protein accredited to the size portion listed sufficiently large, to permit the liberal use of fruits and vegetables in Group 3, with regard to their protein content. If one were to plan a diet for a nephritic patient according to this plan, one should count the number of points and multiply by 4, then recalculate the amount of protein by using figures representing the more accurate protein content of each item of food. The final amounts would be about the same. In Tables 1 and 2 is presented such a comparison for two nephritic diets, one allowing from 7 to 8 points and one from 12 to 13 points, prepared according to the principles advocated. This shows that the approximation of the protein content is really remarkably close. Extreme accuracy is not needed in nephritic diets.

Table 1.—*Diet in Nephritis: From 25 to 30 Gm. of Protein (from 7 to 8 points), 1,200 Calories*

	Size of Portion	Grams Protein	Protein Points	Acid-Forming	Base-Forming	Calories
Breakfast						
Whole wheat toast	1 slice	2.5	1	+	..	71
Butter	½ tablespoonful	...	...	..	..	54
Grapefruit	½	0.5	...	..	+	40
Sugar	½ tablespoonful	...	...	..	..	30
Baked apple	1 average	1.0	...	..	+	65
Sugar	½ tablespoonful	...	...	..	..	30
Cream	2 ounces	1.0	0.4	..	+	103
Lunch						
Milk	8 ounces	7.5	2	..	+	167
Apple-celery-nut salad						
Apple	½	0.5	...	..	+	32
Celery	average	0.5	...	..	+	10
Calif. walnuts	½ ounce	2.2	1	..	+	95
French dressing	1 ounce	...	...	..	..	144
Cellu Bran wafers	as desired					
Dinner						
Milk	8 ounces	7.5	2	..	+	167
Baked potato	1 rather small	2.5	1	..	+	99
Butter	½ tablespoonful	...	...	..	..	54
Spinach	average helping	1.0	...	..	+	30
Bacon	½ ounce crisp	2.5	0.6	+	..	78
		32.2	8 points = 32 gm.			1,220

21.7 gm. or 72 per cent. of the protein comes from good quality sources.

Table 2.—*Diet in Nephritis: 50 Gm. of Protein (from 12 to 13 Points), 2,000 Calories*

	Size of Portion	Grams Protein	Protein Points	Acid-Forming	Base-Forming	Calories
Breakfast						
Whole wheat toast	1 slice	2.5	1	+	..	71
Butter	½ tablespoonful	...	...	..	..	54
Orange	1 average	0.5	...	..	+	40
Banana	1 average	1.0	...	..	+	81
Cream	2 ounces	1.0	0.4	..	+	103
Egg	1 average	6.5	2	+	..	75
Lunch						
Salad						
Pineapple	1 slice	0.5	...	..	+	47
Cottage cheese	1 tablespoonful	10.5	2	..	+	55
Mayonnaise	2 tablespoonfuls	0.5	...	..	..	200
Baked potato	1 rather small	2.5	1	..	+	99
Butter	1 tablespoonful	...	...	..	..	108
Stewed tomatoes	average helping	1.0	...	..	+	30
Butter	½ tablespoonful	...	...	..	..	54
Milk	8 ounces	7.5	2	..	+	157
Dinner						
Oyster soup						
Oysters	¼ cup	6.0	2	+	..	62
Milk	4 ounces	3.75	1	..	+	78
Butter	½ tablespoonful	...	...	..	..	54
Head lettuce	average helping	1.0	...	..	+	30
Mayonnaise	2 tablespoonfuls	0.5	...	..	..	200
Carrots and peas, butter	½ tablespoonful	2.0	0.5	..	+	100
Cellu bran wafers, butter	1 tablespoonful	...	...	..	..	108
Ice cream	average helping	3	1	..	+	214
		50.25	12.9 points = 52 gm.			1,901

38.25 gm. or 77 per cent. of protein comes from good quality sources.

SUMMARY

The advantages claimed for this arrangement of foods over that of O'Hare and Vickers [3] are:

1. Attention is paid to the quality as well as to the quantity of the protein intake. The average untrained person, using the original method, would select most of his protein "points" from their Group 1 foods, all of which contain protein of quite inferior quality. He would do so because he would get so much more to eat, for the same amount of protein.

2. Recognition is given to the necessity for minerals and vitamins in the selection of the food.

3. Importance is attached to the acid-base balance of the diet, a factor not mentioned in the method referred to. Undoubtedly, much more work needs to be done before it can be stated positively that distinctly acid urines are irritating to damaged kidneys, and that decreasing the degree of acidity will hasten repair processes. Evidence merely points in that direction at present. The fact remains, however, that in human nutrition, improperly balanced diets are almost always decidedly acid-forming, and that well balanced ones are base-forming.

The method gives concrete help in selection of good quality protein, an adequate mineral supply and a sufficient amount of vitamins. Sansum, Blatherwick and Smith [4] recognize the importance of such factors in food selection, but take it for granted that physicians and patients are all familiar with the sources of such food constituents.

CULLEN'S SIGN IN CONDITIONS OTHER THAN EXTRA-UTERINE PREGNANCY *

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In 1919, Cullen [1] made the interesting observation of a bluish discoloration about the umbilicus associated with extra-uterine pregnancy. Later, Hellendall [2] described the same condition but, apparently, without knowing that it had previously been described. Two years later, Novak [3] reported the finding of this sign in two other cases of extra-uterine pregnancy.

Today this bluish black appearance about the umbilicus, unassociated with any history of injury, together with a definite uterine history usually typical of the slow tubal abortion type of bleeding, is considered a positive sign of ectopic pregnancy.

Novak, however, mentions the fact that other conditions of intra-abdominal hemorrhage due to causes other than extra-uterine pregnancy may possibly cause this umbilical discoloration, but, in view of the infrequency of such conditions, states that it can practically be considered a sign especially applicable to the lesion in which it was originally described.

REPORT OF CASE

A girl, aged 5 years, who had originally been operated on by Dr. Joseph C. Bloodgood for sarcoma of the right kidney, was readmitted recently to the St. Agnes Hospital. At operation it was found that the peritoneum in front of this kidney was somewhat attached to the adjacent tissue, and since it did not appear to be diseased it was not removed with the tumor mass. About six months later, the patient returned. She was severely emaciated and anemic. The abdomen was distended, giving the patient respiratory distress. It was evident that there was a diffuse peritoneal invasion from secondary growths. However, the distention could not be explained entirely by new growth.

Around the umbilicus there was seen a distinct, diamond shaped bluish discoloration, which was typically like that of the drawing in Cullen's article. On the presence of this sign, it was stated that the patient had a hemoperitoneum associated with the presence of a neoplasm.

At operation, which was attempted for the purpose of offering some relief, it was found that in addition to the sarcomatous growths there was about 300 c.c. of dark bloody fluid, which continued to drain from the wound as long as the patient was in the hospital.

COMMENT

Hemoperitoneum is not infrequently associated with diffuse neoplastic disease of the abdominal cavity. It is also found in acute hemorrhagic pancreatitis, tuberculosis and ruptured corpus luteum bodies. Because of the mechanism of deposition of the blood pigment, it is only usual to find this sign in patients with thin abdominal walls.

Although, from a practical point of view, little could be done for the patient, yet it is of interest to know that Cullen's sign can be found in conditions other than extra-uterine pregnancy.

* From the Surgical Clinic of St. Agnes' Hospital.

1. Cullen, T. S.: Bluish Discoloration of the Umbilicus as a Diagnostic Sign Where Ruptured Uterine Pregnancy Exists, Contributions to Medical and Biological Research, dedicated to Sir William Osler, 2, Hellendall, H.: Ein neues Symptom der extra uterine Schwangerschaft, Zentralbl. f. Gynäk. 45:1890 (June 25) 1921.
3. Novak, Emil: Bluish Discoloration of the Umbilicus in the Diagnosis of Ruptured Extra-Uterine Pregnancy, J. A. M. A. 78:643-644 (March 4) 1922.

COORDINATION IN MEDICAL EDUCATION *

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Medicine may be looked on as an experimental biologic science. It may also be looked on as a social science. Hitherto in discussing problems of medical education our attention has been focused mainly on the relations of medicine to the basal sciences. The entrance requirements to the medical school have been increased chiefly for the purpose of gaining more time for preparation in chemistry, physics and biology. The first reform insisted on in the medical schools was better provision for the basal sciences and for full-time scientists to man them. Most of the money spent in recent years on clinical development has gone into providing laboratory facilities for the clinical branches and for salaries for laboratory trained men to head the clinical work. Flexner's [1] recent scholarly work on medical education takes the subject up largely from the standpoint of laboratory methods applied to medicine. No one disputes the indispensable value of modern methods of physical science in medical education and practice.

On the other hand, it should not be forgotten that medicine is also a social science and deserves university recognition from this point of view as well as from that of experimental biologic science. We should do what we can to introduce to the problems of medicine students trained in simplified inductive laboratory science. We should also give the student opportunity to prepare to meet the complex problems of social adjustment. Much has been said about the importance of having clinical teachers sufficiently trained in chemistry, physics and the biologic sciences to make it possible for them to make ready use of these methods in clinical work, and thus to inspire the students to make practical use of their preclinical training. It is likewise important for the clinical teachers to have some understanding of social problems, and thus prepare the students to make in practice effective use of their clinical training. This understanding should be gained not only from practical social workers but also from scientific students of social problems. Sir George Newman's [2] recent study of medical education in England is of special value because of his broad social point of view.

Agriculture, like medicine, may be looked on both as an experimental biologic and as a social science. The two sciences have much in common from the standpoint of scientific methods. It is not without significance that two of the present members of the faculty of the School of Hygiene at the Johns Hopkins University were called there from agricultural colleges. I deem it especially fortunate that the medical school at Wisconsin adjoins the college of agriculture on one side and that of letters and science on the other side. A list of some of the major departments of the college of agriculture indicates the correspondence in scientific methods in medicine and in agriculture: agricultural bacteriology (including the bacteriology of foods), agricultural chemistry (including biochemistry), animal husbandry (including animal breeding), economic entomology, genetics, plant pathology and veterinary science.

* Read before the Annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals, Chicago, March 10, 1925.

1. Flexner, Abraham: Medical Education, a Comparative Study, 1925.
2. Newman, George: Recent Advances in Medical Education in England, 1923.

On the other hand, there are a number of departments in the college of agriculture which express the social science aspects of agriculture, and which are not usually represented in corresponding departments in a medical school, among them a department of agricultural economics.

A department of hygiene in a medical school may deal with some of the more general social aspects of medicine. When an endowed school of public health is associated with a medical school, more adequate treatment of certain aspects of medicine from the social side is given in departments of vital statistics, public health administration, industrial medicine, child hygiene and similar departments. In general, however, we are lacking in opportunity for scientific study of medicine in its social aspects, and this is a subject well worthy of university support.

The programs of the Association of American Medical Colleges and of the Congress on Medical Education this year show the growing interest in the social aspects of medicine and medical education. Nearly half the papers might be classed as dealing with this field. Much more than half would be thus classed were we to include the sessions of the congress devoted to hospitals, licensure and public instruction. The department of medical economics of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is one of the most useful features of this journal.

I should like to see established, in connection with some of our stronger university medical schools, departments of medical sociology for scientific research in this field and for instruction of medical students in elementary principles. This work should be made elective. Our curriculum is already overloaded with required work. By establishing departments of this kind with elective courses, a university would make it possible for the clinical teachers to pick up and throw in as incidental to their clinical teaching more accurate information concerning the social aspects of medicine than is at present possible, and thus indirectly all students would be reached. We need professorships similar to that of Rumpf in social medicine at the University of Bonn, and textbooks produced at least in a class with that on Soziale Medizin of Ewald of Frankfort.

What are some of the problems for a department of medical sociology? Primarily the study of the relation of medicine to society and of society to medicine. This, of course, is a very broad subject, and, like other broad fields of knowledge, is likely to make the greatest progress when studied intensely in limited but promising fields. The laboratory scientist experiments under controlled conditions. The social scientist has to watch the results of social experiments, in the main beyond his control. He should be called on, however, for a thorough understanding of survey, statistical and graphic methods of the study of the complex. A department of medical sociology in a medical school should, of course, be connected with the division of social studies of the university, including departments of economics, sociology, education, history, philosophy, political science and law. Its boundaries should be purposely left undefined, but it should include the social aspects of health as well as of disease, of prevention as well as of cure—medicine in the broadest sense.

THE SCOPE OF MEDICINE

Medicine as a science in a broad sense may be considered to comprise knowledge of disease and how to overcome it and of health and how to promote it. As such it is of vital importance to every individual to an extent true of no other science. As the complexities of civilization increase, the importance of a personally intelligent care of the body is increased for each individual not receiving custodial care. An agricultural college is interested not only in advancing the science of agriculture and in training men to become expert agriculturalists and teachers of agriculture, but also in getting to every farmer in its sphere as much accurate information as possible. A medical school should be interested not only in the advance of medical knowledge and in training students so that they may become expert physicians and health officers, but also in the transmission of a scientific attitude toward the care of the health, not to one class of the community but to every intelligent person within its sphere. A college of agriculture may attempt directly the task of diffusing useful information to the farmer. The task of diffusing information as to the care of the health directly to every individual within its sphere is more than a medical school can wisely attempt, although some public lectures, such as those given by the Harvard Medical School, do much good, and a vast amount of valuable teaching of individuals is given in the inpatient and outpatient departments of university hospitals.

The medical school is called on to educate physicians so that they may become in reality doctors, that is, teachers, of scientific medicine. It is called on to give aid in training nurses in scientific hygiene, and so trained they become in turn useful teachers. It should play a part in educating men for public health work, and such men properly trained become perhaps the most useful teachers of hygiene. A university medical school may be called on for aid in training men for dentistry. If so, adequate funds should be provided and high scientific standards maintained. In turn, the dentists become valuable public teachers of an important part of preventive medicine. Or it may furnish courses in some of the medical sciences for students of physical education and for students of pedagogy, and through professional teachers reach large numbers. If the university with which a medical school is connected maintains an extension division, this will be sure to have courses in hygiene, which should be vivified through friendly relations with the medical school. The medical school should be in active cooperation with the local board of health, or, if a state university medical school, with the state board of health also, and lend aid in the educational activities of such boards. It should also cooperate with the efforts of the American Medical Association and of effective voluntary agencies, such as the American Association for Medical Progress, to further public education in medicine. The medical student should learn, while still an undergraduate, of his responsibilities as a public teacher. For his benefit after graduation, the medical school is called on to provide special courses, so that he may keep up to date with medical progress in the field of practice and in social medicine.

The educational responsibilities of a medical school thus extend far beyond the training for the practice of medicine. If we look at medical education from the latter more special point of view, we are confronted with the fact that conditions of medical practice are changing. The conditions that we should prepare our students to meet are not those of today but those of tomorrow. We judge of tomorrow's conditions by comparing yesterday's with today's. The curve at present is in the direction of increasing urbanization,

specialization and combination, medical industrialization. Between the health officer on one side, who takes away disease, and the specialist on the other side, who takes away the patients, the general practitioner is beginning to think that he should get into one or the other of these fields while there is time. About one fourth of Wisconsin practitioners today announce themselves as specialists, and 10 per cent. as confining their work to a specialty. In an address delivered in 1916, I [1] showed that, of the students graduated from the Johns Hopkins Medical School during the first ten years, about 10 per cent. had died or withdrawn from practice ten years later; 10 per cent. had gone into scientific or administrative work and, of the remaining 80 per cent., only about one fifth were in general practice without an announced specialty. About one fifth were in general practice with a specialty, one fifth were internists, and the remaining two fifths were in surgical specialties. Our modern training by specialists certainly tends to produce specialists.

One of the chief questions before medical educators today is to decide whether or not specialization and group practice are likely to increase in the future at the expense of general practice. If it is neither inevitable nor desirable that they should do so, then what steps are to be taken to make general practice more desirable? If it is inevitable or desirable that specialization and group practice shall practically monopolize medical practice, then what sort of medical education will best prepare for this? Questions of this character are too far reaching to be discussed at length here. Efficiency of medical service should be the deciding factor. Specialists in medicine are necessary. Group practice has proved highly useful. The personal relationships in general family practice appear, however, to offer too valuable a side of the art of medicine to be lightly given up. After all, human beings are individuals and are not merely environments for a part in which the specialist takes interest, or merely parts of an environment in which the health officer takes interest. We shall do well to continue to make our chief aim as educators the training of students for scientific general practice. If we do this, however, we should lend all possible aid to making conditions of general practice attractive to the best type of men.

To do this, I believe of first importance the education of the public as to the aims and methods of scientific medicine. If the British had been as well educated in science as they have been in sport, they would not now suffer from restrictions in animal experimentation. Had popular education in Germany been more scientific, there would probably not have been half as many quacks as regular practitioners at the height of German medical scientific activity. The importance of public education has been recognized by the American Medical Association through the establishment of the Bureau of Health and Public Instruction. I have suggested some methods whereby medical schools can give aid. I believe that the greatest handicap in this education comes, perhaps, from low standards of medical practice established before the reformation of medical education in this country. A well trained young physician, whom I know, recently opened an office in a small town in Wisconsin. He found that all the people in that community wanted from a physician consisted of prescriptions, alcoholic or otherwise, and that they did not appreciate at all his efforts at scientific diagnosis. He could make a good living if he gave them what they wanted; but, if he attempted to give the patients the attention he felt they needed, his competitors got the business. He felt that he could not afford to attempt the scientific education of this community, gave up his practice there and is now happy practicing scientific medicine on a very small salary in a large charity hospital. Free tuberculosis clinics, child welfare clinics and similar devices for arousing public interest in scientific diagnosis appear at present necessary aids to public education in medicine. Since, however, it appears probable that the chief duty of the family practitioner of the future will be to act as a personal health officer, and that as such he should receive his chief financial reward from preventing disease and from early diagnosis, it is unfortunate that the public should get the impression that services of this kind should be free while treatment should be compensated. I believe that those responsible for educational diagnostic clinics should emphasize the importance of rewarding the private practitioner for careful physical examinations, advice as to prevention of disease, and early diagnosis.

THE NEED OF HOSPITALS

Closely associated with public education in scientific medicine comes the need of hospitals. The public has to be educated to understand the importance of liberal provision for the erection and maintenance of hospitals, and in turn the hospital is known to be perhaps the most important institution for public education in scientific medicine. There is probably no question in medical sociology more in need of a thorough scientific study than that of hospitals. This is recognized by the American Medical Association, which, through the Council on Medical Education and Hospitals, has been doing much to gather the data indispensable for such a study.

In Wisconsin, the public has been educated and has responded well to the need for custodial care of the insane and for institutional care for tuberculosis patients. Many of the county insane asylums and county sanatoriums for the tuberculous are thoroughly modern institutions. On the other hand, the public has done comparatively little toward providing general hospital care. The state has recently completed a 325 bed state general hospital at the state university, but there are only four counties and three cities in the state which maintain public hospitals, with a total of 475 beds. In addition, there are seven municipal isolation hospitals, with a total of 375 beds. Most of the general hospitals in the state have arisen in response to the demands of surgeons for proper places in which to care for their patients, and most of them are located in a few of the larger cities that have developed a reputation as surgical centers. They are supported almost wholly from fees of patients, although the counties sometimes pay something toward the cost of care of patients, and there is some support through public subscriptions. There are no well endowed hospitals in the state, although there have been gifts and bequests for building hospitals, modest in amount compared with those in some other states. About two thirds of the beds in general hospitals are in institutions established by denominational organizations, chiefly Catholic sisterhoods. Outside the cities that have developed a reputation as surgical centers, the hospitals as a rule are small private surgical hospitals. The total number of general hospital beds in the state, outside of state and federal institutions, is about 6,300 beds. If we take the population of the state as 2,850,000, this gives one bed for each 452 people. It appears

1. Bardeen, C. R.: Aims, Methods and Results in Medical Education, Tr. A. M. Colleges, Chicago, 1916.

probable that there is need for community center public hospitals designed with special reference to facilitating the work of the general practitioner. Whether or not a scheme such as that suggested by Roeder,[4] but robbed of some of its socialistic features, would best fit the bill is too big a subject to discuss here.

LABORATORY FACILITIES

One of the important features usually urged by advocates of community center hospitals as aids to general hospitals is that of better laboratory facilities. While Wisconsin has been backward as compared with some other states in the development of community center hospitals and has as yet nothing special as an example to offer along these lines, in the development of laboratory facilities for the general practitioner the state has, I believe, taken a distinct forward step.

The state board of health has a central laboratory at Madison, a branch laboratory at Rhinelander, and six cooperative laboratories well distributed about the state, to which specimens may be sent for the diagnosis of diphtheria, typhoid, paratyphoid, tuberculosis, gonorrhea, rabies, intestinal parasites and other infections. During the year 1923-1924, 51,168 specimens were received at the central laboratory and 31,953 at the branch laboratories, a total of 83,121 specimens, in the main from physicians.

The laboratory of the state psychiatric institute, the central laboratory of the board of control of state charitable and penal institutions, located near Madison, makes Wassermann examinations, spinal fluid examinations and blood chemistry examinations for the physicians of Wisconsin. About 32,000 Wassermann examinations were made last year, and 1,000 spinal fluid examinations. The blood chemistry examinations have but recently been established, but are now being called for at the rate of between 5,000 and 10,000 a year.

These services are carried out free of charge. It is undoubtedly a great economic saving to have laboratory work of this kind centralized, and a great convenience to the physician who learns to make use of them. Both services, while independent, are closely affiliated with the medical school of the state university. The purposes of the laboratories are not only to conduct routine work but also to carry out scientific investigation, and for this the university affiliation is of great value. On the other hand, it is to the advantage of the medical school to be in touch with services of this kind. The central laboratory of the state board of health sends free of charge to physicians vaccines for use against typhoid and whooping cough. In addition, the state board of health supplies diphtheria antitoxin, smallpox vaccines and tetanus antitoxin at wholesale prices to any citizen, and a solution of silver nitrate free of charge to all physicians and midwives, to be used in the eyes of the new-born for the prevention of ophthalmia neonatorum.

Laboratories such as those referred to above place at the disposal of the general practitioner facilities for use in technical diagnostic procedures highly advantageous to the practice of scientific medicine. Probably more than two thirds of the practitioners in the state take advantage of them, and this I believe fully justifies the public expenditures involved.

CONSULTATION

The general practitioner needs to have at his disposal not only technical laboratory procedures but also opportunity for consultation with specialists. Public health work has removed much of the sickness that used to occupy the time of the general practitioner, and as time goes on disease will more and more disappear through prevention, and in this disappearance the family practitioner is called on to play an active part. With the disappearance of disease, however, the work for the practitioner is not lessened, because we at the same time increase our standards of health. There is more work in keeping the teeth in good condition than in pulling decayed teeth, more work in keeping persons fit when age begins to tell on the constitution than in signing death certificates for infants. But for this increase of work due to increase of standards, there is required an increase of skill in diagnosis and treatment. This skill is usually first developed by specialists who devote themselves intensively to a narrow field of work, to biologic and clinical research; but as a rule, with increase of knowledge and experience, methods of diagnosis and treatment become simplified. Intense specialization ceases to become necessary for effective care. The general practitioner needs the aid of the specialist when highly specialized skill is required; but, as knowledge becomes advanced and methods simplified, he can do more and more in fields at first requiring the specialist. The specialist of today is doing too much routine work that the general practitioner should be able to do as well or better, he is not doing enough to advance knowledge and simplify methods. The general practitioner is apt to be weak in lines in which the specialties have become highly developed, strong along lines in which they are not so well developed. It should be the other way about. The general practitioner should be an expert in determining the condition of the teeth, although not necessarily in the mechanics of filling them. This is now beginning to be realized. Modern ideas of focal infection would have been developed sooner if this had been sooner realized. The general practitioner should be an expert with the ophthalmoscope, although not necessarily in fitting glasses. He should be an expert with the nasal speculum, although he should not attempt nasal sinus operations. He should be at home with the laryngoscope and the ear speculum and be capable of using the bronchoscope. Practitioners of the head specialties should encourage the general practitioners who consult with them to make more use of these instruments of precision and to make more use of simple remedies, and should confine themselves to consultation work and to those operative procedures which at present really require the skill of the specialist. The general practitioner should refuse to be a distributing agent to specialists and should refer his patients to consultants.

In development along these lines, the medical school should be able to play an effective part. If a medical school is to advance medical knowledge as well as teach the art of medical practice, it must have a faculty composed of specialists. The work of these specialists as specialists is the better if each continually strives not only to advance his field of work but also to simplify it by aiming at fundamentals. The value of these specialists as teachers is vastly increased when they aim to make the students acquainted with those fundamentals of each specialty which should form the working equipment of every general practitioner. The usefulness of those specialists as members of the medical profession becomes greatly extended when they look on the patients entrusted to their care in the teaching hospital as patients to be returned, with data and advice, after special service has been rendered, to the care of the general practitioner,

4. Roeder: Die Sozialisierung der ärztlichen Heiltätigkeit im Verbande der Gesundheitsversicherung.

THE STATE HOSPITAL

In this belief we have attempted to organize the new state hospital at the University of Wisconsin. This new hospital is especially "designed for the care of persons afflicted with a malady, deformity or ailment of a nature which can probably be remedied by hospital service and treatment and who would be unable otherwise to secure such care." The statutes provide for care at joint state and county expense of residents of Wisconsin needing care, and financially unable to procure proper treatment. Such patients are admitted through the county courts, and the judge of the court is required to appoint a physician of the county to examine the patient and give his opinion as to "whether the condition of the patient can probably be remedied or should be treated at a hospital and any information within the knowledge of the physician relative to his financial situation. The physician shall be paid by the county five dollars and actual and necessary expenses."

Patients thus sent in are called public patients. Such patients may, if financially able, pay a part of the cost of hospital care, the remainder being paid jointly by the state and county. They are called part-pay patients.

Patients are also admitted who can pay for the actual cost of hospital care but who cannot afford to pay fees for special professional services. Such patients are received only on the recommendation of a public officer, a physician, a minister or a priest, or by an officer of a recognized public welfare organization. They are called clinic patients.

The state board of control sends to the hospital patients from the state charitable institutions for whose treatment local facilities are inadequate. These are called board of control patients.

The great majority of the patients coming to the hospital, both public and clinic, are referred there by physicians. This is true of the outpatient as well as the inpatient services. The only patients received in the outpatient department are public and clinic patients as defined above, patients in emergency cases, and patients referred by physicians for special laboratory examinations or treatment not otherwise available. The endeavor is to make the hospital so far as possible an institution for cooperation with the general practitioner in the diagnosis and treatment of patients of a class that cannot afford the fees of specialists. When, however, such patients can afford to pay something toward the cost of hospital care or the overhead of an outpatient department, they are expected to do so. The attempt is made to keep the family physician fully informed as to the condition of his patient and to return the patient to his care as expeditiously as possible. Physicians are invited to visit the hospital and make themselves fully informed as to the procedures in vogue. It is the intention to offer from time to time short courses in the new procedures. Such a course was offered last year in the use of insulin, and of the physicians who took that course many have since referred to the hospital some of their more difficult cases for special study and advice. A relatively small amount of hospital care may thus enable the family physician to do much more for his patient than would otherwise be possible. The hospital staff is made up of specialists. Treatment is frequently needed which only specialists with special facilities can give. So far as possible, the specialists are expected to work in cooperation with the family physician and act as true consultants in the sense referred to above.

The members of the hospital staff are partly on a full service, partly on a part-time basis. The former receive regular academic salaries, the latter nominal salaries. The full service men devote their whole energies to clinical work in the hospital, teaching and research. The younger men of this group engage in no private practice. The more experienced men, whose services as consultants or specialists may be of value to those engaged in private practice, are permitted to maintain offices outside the hospital for private consultation work at hours arranged so as not to interfere with the major work of care of patients in the hospital, teaching and research. Those thus engaged in private consultation work are permitted the use of beds in the hospital for private patients, but the number of such beds is limited.

We desire not only to coordinate medical care of patients at public expense as harmoniously as possible with the work of those engaged in the private practice of medicine and with the existing resources of the state for hospital care of patients, but also to make full use of available facilities for training students. We plan, in the teaching of medical students, to have the services not only of the staff of the state general hospital but also of extramural teachers selected from the staffs of hospitals affiliated with the university for the purpose of promoting training in the art and science of medicine. While at first such teachers may be restricted to members of the staffs of state institutions and of hospitals in or near the city of Madison, it is hoped eventually to enter into relations of this character with physicians in other parts of the state. It is desired to reintroduce into medical education the advantages of the old apprenticeship system under conditions of modern medical practice, and this can be done only when a large number of men interested in medical progress take part each in the training of a small group of students.

A plan of this kind is feasible only on the assumption that a university medical school can be made a stimulating center for the coordinated advance of medicine, a place from which the man in private practice can get something worth while and to which he can contribute something worth while.

We believe that the student before graduation should be given opportunity to obtain some familiarity through personal experience with the conditions of scientific private practice, with the aims and methods of public health work, with public charitable work, and with the various voluntary agencies that have to do with the application of medical knowledge to social needs.

Few realize, I believe, the number and scope of agencies attempting work of this type. A chart recently prepared by Prof. Ford H. MacGregor of the Extension Division of the University of Wisconsin shows an astonishing number of such agencies in that state and the complexity of their interrelations.

CONCLUSIONS

1. We need data not only on the various agencies that are attempting to make medical and sanitary knowledge useful to society, but also on the results effected.

2. Studies of this kind require trained experts who are primarily interested in determining the truth rather than in propaganda for a cause.

3. One of the best methods of encouraging such studies would be to establish university departments of medical sociology or of social medicine, equipped for scientific research.

4. The establishment of such departments would enable medical students to get a better training for leadership in social medicine than is at present offered.

CLINICAL APPLICATION OF THE BROMSULPHALEIN TEST FOR HEPATIC FUNCTION *

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Since the introduction, three years ago, of a method of estimating hepatic function by determining the rate of removal of phenoltetrachlorphthalein from the blood stream,[1] this procedure has been widely used in the clinic. Sufficient experience has been gained to indicate that this method affords several improvements over the classic liver function tests. First, it is specific, and, if properly performed, abnormal results have invariably meant a disturbance in hepatic function. The specificity of a test is a valuable requisite and greatly enhances the clinical reliance that may be placed on it. Secondly, it is comparatively free from technical error and is not difficult to perform. Thirdly, it affords a quantitative measurement of the severity of impaired function. This has been proved experimentally, and clinically it is evidenced in studying cases of acute liver disease (catarrhal and arsphenamin jaundice and eclampsia), in which successive stages of functional repair may be demonstrated.

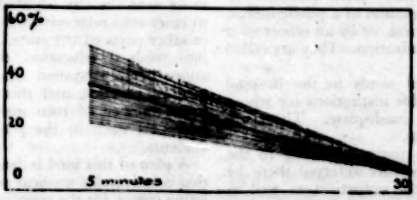


Chart 1.—Diagrammatic representation of the disappearance of bromsulphalein from the blood stream in twenty-five persons without liver disease: The shaded area represents normal variations, and the heavy line the average; 2 mg. per kilogram injected intravenously; percentages represent concentrations of dye in the serum; time refers to time after injection.

There are a few disadvantages to the employment of phenoltetrachlorphthalein in this method of testing liver function. The amount of this dyestuff necessary is rather large, 5 mg. per kilogram (2⅓ pounds) of body weight; the concentrations that it reaches in the blood never exceed 35 per cent. of the amount injected even in severe liver disease; irritation of the vein wall is frequent, and occasionally thrombosis and systemic reactions occur.

In order to overcome these difficulties, as well as to determine the comparative value of various dyestuffs in estimating hepatic function, we [2] undertook a pharmacologic study of a large group of phthalein compounds. A new dye, bromsulphalein [3] (phenoltetrabromphthalein sodium sulphonate) was found, which would seem to be ideal for the purpose of testing liver function. It is excreted in the bile of normal rabbits to the extent of 85 per cent. in one hour after its intravenous injection. Normally it is rapidly removed from the blood stream through the activity of the liver cells, since, when the liver is extirpated, it is retained in the blood serum almost in toto during the early period following its injection. These are striking advantages over phenoltetrachlorphthalein, which when similarly injected in rabbits, is excreted in the bile to the extent of only 5 to 10 per cent. in one hour, and which never reaches high concentrations in the blood.[2] In normal animals, bromsulphalein appears in the urine only in traces or not at all.

We have performed more than fifty tests on human beings with bromsulphalein, and results have been in accord with experimental findings. The greater concentrations reached in the blood make it possible to use smaller dosages. We have found 2 mg. per kilogram of body weight to be the smallest satisfactory dose for man. The dye in this amount is nonirritating to the vein wall and may be injected intravenously in concentrated solution without further dilution with physiologic sodium chlorid solution. The technic is now sufficiently simple to be applicable to routine usage. It is as follows:

The patient is weighed and the dosage calculated on a basis of 2 mg. per kilogram of body weight. The body weight of the patient in pounds divided by 55 will give the exact quantity, in cubic centimeters, of the 5 per cent. solution required.[3] It may be measured by drawing it into a sterile 5 c.c. syringe and then slowly injected directly into an arm vein; the injection should be sufficiently slow to occupy one minute, and care should be taken not to allow infiltration of the dye outside the vein. Thirty minutes after injection, a sample of blood (4 or 5 c.c.) is drawn, preferably from the opposite arm, by allowing the blood to run through a needle directly into a dry test tube. In cases of early liver disease it may be advisable to obtain, also, a sample of blood at exactly five minutes after injection.

After the blood has coagulated it is centrifugalized, and the clear serum is pipetted into two small test tubes. To one of these is added 1 or 2 drops of a 10 per cent. solution of sodium hydroxid to bring out the color of the dye, and to the other tube a drop of 5 per cent. hydrochloric acid to clear the serum of any hemolysis. The amount of dye present is now estimated by direct comparison with a series of standards.[4] The tube of clear acidified serum is placed in front of the standard in a suitable comparator box, and by simultaneously looking through both tubes a comparison can be made with the colored alkalized serum. The standards may be prepared by adding 4 mg. of bromsulphalein to 100 c.c. of water alkalized with 0.25 c.c. of a 10 per cent. solution of sodium hydroxid. This represents the 100 per cent. standard. By proper dilutions with similarly alkalized water, ten standards are prepared, ranging from 10 to 100 per cent. Five cubic centimeters of each standard may be sealed in a small test tube, and no deterioration in color will occur for several months,[5] if they are kept in the dark.

RESULTS

To establish normal values, tests were performed on twenty-five patients in whom no evidence of liver disease was present. Twelve were dispensary patients

* From the Department of Pharmacology, McGill University Faculty of Medicine, and the Royal Victoria Hospital.

1. Rosenthal, S. M.: J. Pharmacol. & Exper. Therap. 19: 385 (June), 1922.

2. Rosenthal, S. M., and White, E. C.: J. Pharmacol. & Exper. Therap. 24: 265 (Nov.) 1924.

3. Bromsulphalein is prepared by Hynson, Westcott and Dunning, in sterile ampules containing a 5 per cent. solution.

4. Bromsulphalein may be extracted from the serum with acetone in a manner previously described for phenoltetrachlorphthalein (J. A. M. A. 82: 547 [Feb. 16] 1924); W. L. Bloom, personal communication to the authors.

5. Permanent standards with comparator box may be obtained from Hynson, Westcott and Dunning, Baltimore. Phenoltetrachlorphthalein standards cannot be employed for bromsulphalein.

with acute or chronic gonorrhea.[6] Eleven were hospital patients who were convalescent from diseases other than those of the digestive system, and who were afebrile. Two were patients with chronic nephritis. In these patients, the following results were obtained: Five minutes after injection, from 20 to 50 per cent. of the dye was present in the serum, with an average of 35 per cent. In thirty minutes after injection the serum was entirely free from dye, or in a few cases contained a very faint trace, insufficient to be colorimetrically estimated. In these normal and control cases the dye appeared in the urine in negligible amounts, ranging from none at all to 0.5 per cent. of the quantity injected. The estimation in the urine may be carried out with the same standards used for the blood serum.

HEPATIC DISEASE

In twenty cases of liver disease studied with the bromsulphalein test, retention of the dye in the blood thirty minutes after its injection varied from 3 to 99 per cent. Since it is normally absent from the blood at this time, the percentage of retention that occurs may be interpreted directly in terms of percentage of impaired function, so that 10 per cent. retention means 10 per cent. impaired function, as shown by this test. The experimental basis for this is shown by the fact that if the entire liver is removed, approximately 100 per cent. retention of the dye will occur.

Patient 1, with 99 per cent. impairment of function, was in the terminal stage of miliary carcinomatosis of the liver, and died eight days later. Patients 2 and 4, in whom 97 and 90 per cent. impairment was demonstrated, presented clinical evidence of severe biliary infection, while death occurred in Case 3 (obstructive jaundice with cholangeitis) within ten days of the performance of the test. The termination of the catarrhal jaundice in Case 4, in fibrosis of the liver and spleen, confirmed the existence of an acute hepatitis. The lowest value was obtained in Case 19, in which syphilitic cirrhosis was present. This is in harmony with the pathologic picture, which consists of gummatous scars with intervening areas of comparatively normal liver tissue. We have been repeatedly struck with the fact that in chronic liver disease a most important factor in determining functional efficiency is the amount and distribution of scar tissue. If, as in gummatous cirrhosis, the scar formation is in localized and scattered patches, the intervening liver tissue is able to undergo hyperplasia sufficient to completely compensate for the damage, and little or no impaired function may be present. If the scar tissue is diffuse throughout the liver, as in portal cirrhosis, but if the relation between injury and repair is such that fibrosis does not destroy the elasticity of the organ before hyperplasia with enlargement of the organ can occur, then the hyperplasia may keep pace with the injury well enough to bring about good functional efficiency. However, if the scar tissue formation is both early and diffuse, so that the organ is held in a viselike framework of newly formed connective tissue, the proliferation of new tissue in response to further damage to the liver is greatly interfered with. This process occurs in atrophic cirrhosis, which does not really represent atrophy, as its name implies, but seems to us rather to be an inability to hypertrophy. Function is usually impaired here, and the liver is poorly able to withstand any added injury. Hepatic enlargement in chronic liver disease, so often interpreted as an unfavorable sign, would seem to us to be, per se, a favorable indication that compensatory hyperplasia has been able to occur. We have recently emphasized, however, that compensation of function is usually fairly good in most cases of uncomplicated portal cirrhosis, and that insufficiency of the liver parenchyma seldom occurs, except as the result of a superimposed acute hepatitis; death in this disease more often results from the disturbances attendant on portal vein obstruction, or from other complications.

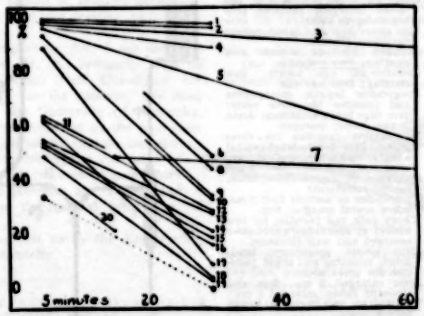


Chart 2.—Removal of bromsulphalein from the blood in twenty cases of hepatic disease: The retention at thirty minutes varied from 4 to 99 per cent.; dotted line represents normal rate of removal.

The functional impairment that is present in the more common liver diseases, cirrhosis, carcinoma, catarrhal and arsphenamin jaundice, has been studied recently with the phenoltetrachlorphthalein test[7] and the same general relationships have been found to apply to those cases that we have examined with the bromsulphalein test. Experimentally and clinically, the retention of bromsulphalein in the blood has been shown to be much more sensitive to liver injury than phenoltetrachlorphthalein. Whether it will be of greater value than phenoltetrachlorphthalein in detecting early liver disease must await further clinical observation.

In the cases of liver disease with abnormal retention of the dye in the blood, bromsulphalein was excreted in the urine during twenty-four hours following its injection in amounts varying from traces to 20 per cent. of the amount injected. The amount of dye that appeared in the urine showed no parallelism with the degree of retention in the blood, so that, as with phenoltetrachlorphthalein, its excretion in the urine cannot be accepted as a quantitative test for liver function, although it may show striking variations from normal in liver disease. Furthermore, in several of the cases in which mild degrees of impaired function could be shown by the retention of bromsulphalein in the blood, no abnormal excretion in the urine occurred.

In none of these cases have we observed any untoward effects; no local irritation of the vein wall occurred, and no subjective symptoms of any kind were experienced.

CONCLUSIONS

Bromsulphalein has been standardized for clinical use as a test for hepatic function, based on its removal from the blood stream.

6. Studied at the Outpatient Department, Brady Clinic, Johns Hopkins Hospital.

7. Rosenthal, S. M.: Phenoltetrachlorphthalein Test for Hepatic Function; Recent Studies, J. A. M. A. 83:1049 (Oct. 4) 1924.

The technic has been further simplified, and the test can be performed in very little time.

Normally following the intravenous injection of 2 mg. of the dye per kilogram of body weight, it is completely removed from the blood in thirty minutes. In liver disease it is retained in the blood in concentrations that vary from 0 to 100 per cent. of the amount injected.

Bromsulphalein Test in Cases of Liver Disease

Case	Diagnosis	Percentage of Dye in Serum: 5 Min.	Percentage of Dye in Serum: 30 Min.	Comment
1	Carcinoma of liver, metastatic	100	99	Progressive jaundice and vomiting for two months; tumor, right breast; liver, enlarged 3 cm., at operation showed miliary infiltration throughout; patient semicomatose; death in eight days
2	Obstructive jaundice, carcinoma of pancreas, gallstones	100	97	Deep jaundice, two months; liver 12 cm. below costal margin; section removed at operation showed fibrosis; extremely sick
3	Obstructive jaundice, gallstones, cholangeitis	100	98	Two weeks' jaundice, fever; at operation, purulent fluid in gallbladder; death four days later
4	Obstructive jaundice, cholelithiasis, cholangeitis	..	90	Ten days' jaundice; fever; mucopurulent fluid in gallbladder, and liver swollen with rounded edge (at operation)
5	Catarrhal jaundice; hepatitis	100	75	Onset six weeks before; liver and spleen enlarged; jaundice now beginning to clear
	(Three weeks later)	..	35	Skin clear; liver and spleen remain hardened (fibrosis)
6	Catarrhal jaundice	..	50	Jaundice for one month, now clearing; liver palpable
7	Arsphenamin jaundice	..	47	Jaundice for one month; now clearing; liver not felt
8	Biliary cirrhosis	..	45	Progressive hepatic enlargement and jaundice for three years; liver edge below umbilicus; death in two weeks; necropsy
9	Obstructive jaundice, cholelithiasis, cholecholitis	95	35	Intermittent jaundice for three years; liver 3 cm. below costal margin; operation; stone in common duct; infection not marked
10	Catarrhal jaundice, mild	..	35	Girl, aged 18; digestive symptoms; sclerae subicteroid
11	Portal cirrhosis, early	65	..	No jaundice or ascites; liver 2 cm. below costal margin; firm
12	Acute cholecystitis, obstructive jaundice	65	30	Biliary colic and jaundice for two weeks; at operation, gallbladder enlarged and wall thickened
13	Preeclamptic toxemia	55	30	Fifth month pregnancy; headaches, vomiting and slight jaundice for three weeks
14	Portal cirrhosis	..	22	Liver enlarged 2 cm., firm and smooth; spleen enlarged 4 cm.; ascites for two months; hyperbilirubinemia
15	Carcinoma of liver (metastatic)	55	20	Aged 58; loss of weight; digestive symptoms for one year; liver to umbilicus, nodular; no ascites, no hyperbilirubinemia
16	Portal cirrhosis	55	17	Ascites for eighteen months; enlarged spleen, subicteric skin
17	Acute cholecystitis, cholelithiasis	90	10	Acute attack of vomiting and abdominal pain; skin subicteroid; at operation, mucopurulent fluid in gallbladder
18	Chronic cholecystitis, gallstones	65	5	Repeated attacks of vomiting and epigastric pain during past three years; sclerae subicteroid; gallbladder palpable
19	Syphilitic cirrhosis	30	3	Ascites for four months; liver enlarged 8 cm., irregular and nodular; Wassermann strongly positive; no hyperbilirubinemia; ascites disappeared entirely after six tappings
20	Congenital syphilis, arsphenamin jaundice	.. (15 min.)	22	Jaundice of three weeks' duration, now fading; onset five weeks following twelfth arsphenamin injection; liver enlarged 2 cm.

The percentage of dye present in the serum thirty minutes after injection expresses directly the degree of impaired function shown by this test.

Technical and fundamental advantages recommend this dye for use as a test for liver function.[8]

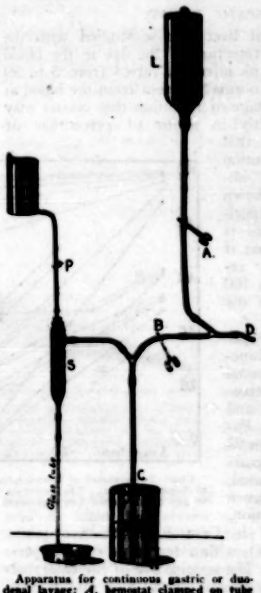
8. Objections to phenoltetrachlorphthalein recently raised by Maurer and Gatewood (J. A. M. A. 84: 935 [March 28] 1925) are obviated with bromsulphalein, as it is specifically handled by the liver, it circulates in the blood in a soluble form, and it is nontoxic in the dosage employed. The statement that the quantity of tetrachlorphthalein used may damage the liver has no foundation in a large amount of experimental work, and seems chemically impossible on a basis of the halogen content.

Clinical Notes, Suggestions, and New Instruments

AN APPARATUS FOR CONTINUOUS GASTRIC OR DUODENAL LAVAGE *

ROBERTSON WARD, M.D., SAN FRANCISCO

As an adjunct to the treatment of general peritonitis, postoperative ileus, intestinal obstruction and acute gastric dilatation, the use of transduodenal lavage and continuous drainage of the upper gastro-intestinal tract has been highly recommended by Matas, Bassler and others. For this purpose the Jutte tube, passed through the nose, is effective and may be left in place for many days without marked discomfort to the patient.



Apparatus for continuous gastric or duodenal lavage; *A*, hemostat clamped on tube to lavage solution, *L*, which is changed to *B* only during lavage; *C*, drainage tube, the end of which is to be kept submerged; *S*, Connell suction apparatus; *P*, petcock to regulate flow for suction; *D*, duodenal tube to patient.

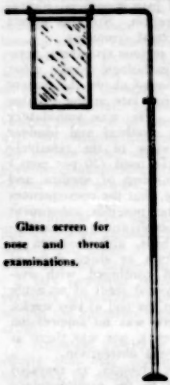
In the treatment of this type of case we have made the following modifications and found them highly effective. Dakin's tube may be obtained and cut to any desired length. Two or three small lead pellets are placed in the end for a weight, and black silk is firmly tied below and above. The tube is now perforated with a Dakin tube punch, or small holes are snipped out with the scissors for a distance of 6 cm. from the end containing the shot. This tube is passed by way of the nose through the esophagus and as far as desired down the gastro-intestinal tract. The upper end is connected with a glass Y tube, one arm of which, as shown in the sketch, is connected to a Kelly bottle for lavage solution conveniently hung on the head of the bed. The other arm of the Y is connected to a Connell suction apparatus, which exerts a constant mild suction. During lavage a hemostat is clamped on the tube, to which the Connell apparatus is applied. When sufficient solution has been instilled, the hemostat is transferred to the lavage solution branch of the Y, and fluids are withdrawn by the suction. In this way there is a constant drainage under mild negative pressure of the stomach and duodenum with little discomfort to the patient, and a convenient apparatus for lavage at hand. The patient may drink large amounts of water with the apparatus in place, and shortly after drinking, the water is returned through the duodenal tube, bringing with it the toxic material which recent experimental work on duodenal absorption leads us to believe responsible for the marked symptoms in these cases, and further, prevents that dilatation and sogginess of the upper intestinal tract which is so commonly found in cases of this type that come to postmortem examination.

* From the Department of Surgery, University of California Medical School.

PROTECTIVE DEVICE IN NOSE AND THROAT WORK

W. N. LIPSCOMB, M.D., LEXINGTON, KY.

It may be that many men doing nose and throat work do not care to employ protection against the cough or sneeze of the patient; but those who do might adopt the plan illustrated here. The great advantage of this in a private office is secondary only to its necessity in handling large numbers of the less careful in the outpatient clinics.



Glass screen for nose and throat examinations.

The device is essentially a glass in a frame supported by a rod bent at the proper height, which can be regulated as regards both the horizontal and the vertical position. In the vertical, which is the usual position, the glass is suspended between the physician's face and that of the patient. In examining a throat, the physician's outstretched arms are extended on each side of the glass without hindrance. No trouble has been experienced in using the head mirror; however, this involves a good quality of glass in the frame, which should be selected personally by the physician desiring such equipment.

In reporting this, I am indebted to Dr. H. S. Wingert, head of the University Health Service, Ohio State University, for the idea, and in a large measure for the pattern. We have adopted this for similar use at the University of Kentucky, with two ideas in mind: first, the protection of the physician, and second, that such a protection might educate our students to the old, old story of the contagious character of droplet infection by sneeze or cough in common respiratory ailments. We believe that both premises are correct, and that they are working out to the mutual advantage of physician and student.

The apparatus was constructed for us by the Engineering College of the University of Kentucky.

UNUSUAL CASE OF EARLY AXILLARY METASTASIS IN CARCINOMA OF THE BREAST

HERBEL E. BUTKA, M.D., LOS ANGELES

The finding of a palpable gland in the axilla per se would not warrant a diagnosis of malignancy without its association with a mass in the breast. However, as is well illustrated by this case, a mass in the axilla should not be passed over lightly, but should be investigated when there is any reasonaly doubt as to its origin.

REPORT OF CASE

Mrs. C. Q. W., aged 45, entered the service of Dr. Thomas McHugh, White Memorial Hospital, Feb. 12, 1925, complaining of some slight pain and a small lump noticeable in the left arm pit. This lump was first noticed one week previously, and was accompanied by some pain and soreness. The patient thought that at first there was some soreness in the left breast, but it was not noticeable at examination. The patient felt discomfort when lying on the left side.

Physical examination revealed a lump in the left axilla, apparently from 2 to 3 cm. in size, and somewhat tender. No palpable mass was found in the breasts, although they were small and there was little excess fat. In the right breast, there was found a scar, the remains of an operation eight years previously for a lump removed at that time.

With a tentative diagnosis of adenitis, either tuberculous or originating in a mastitis, operation was performed and the nodule removed. Rapid section, Terry's polychrome stain being used, revealed the presence of malignancy, associated with areas of degeneration and pus formation.

With this diagnosis, although no nodules could be palpated, the breast was removed, and then search for the origin of the axillary mass revealed two small nodules, the larger slightly less than 1 cm. in diameter, the smaller measuring scarcely 0.5 cm. in diameter, separated by about 1 cm. of normal breast tissue. These nodules were located deep in the breast tissue just superficial to the pectoral fascia, in the upper, outer quadrant of the breast. All three nodules proved to be the medullary type of carcinoma simplex.

COMMENT

The attention of the patient was called to the axillary nodule by the appearance of signs of inflammation, probably due to trauma of the nodule.

The axillary nodule was the only palpable nodule at the time of operation, but proved to be metastatic from a small nodule in the breast.

Metastasis was extremely early, but the patient's chances of permanent recovery were greatly improved by the exploratory operation with immediate diagnosis.

FOUR NEW GENERAL OPERATING INSTRUMENTS

EMMET A. PRINTY, M.D., CHICAGO

The distinguishing features of the instruments shown in the accompanying illustrations are their sturdy construction and the fact that each instrument, as it rests on a flat surface, is raised up on one side by means of a projecting flange or pin, making it more easily grasped.

The needle holder (Fig. 1) was devised with a view of improving on present types of holders, in that the jaws are

Fig. 1.—Needle holder.

sufficiently heavy to withstand the strain in grasping heavy needles, and narrow enough to handle curved needles with a minimum of breakage. The illustration shows the general appearance of the instrument. It is finished in a permanent black so that it is always easily distinguished from other instruments. In order to facilitate the easy handling of the

Fig. 2.—Spring scissors.

holder, I had the makers provide two well rounded right angle terminals to the shanks. Thus, when the instrument is

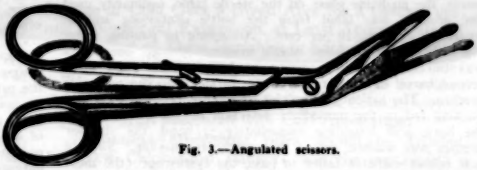


Fig. 3.—Angulated scissors.

placed on a flat surface, one side is always free or "lifted" from the flat position, so that the fingers or thumb can be readily placed under it.

The spring scissors (Fig. 2) will be found to save time in cutting ligatures, small pedicles, etc. They are also useful

for various types of dissecting. The smooth, blunt-pointed blades can be used for blunt dissection; the spring is strong enough to permit the separating of tissues by divulsion.

The angulated scissors (Fig. 3) are furnished with an elongated probe point. They will be found useful in various types of dissection and in cutting fascial layers.

The straight scissors of conventional pattern (Fig. 4) were added to complete the set. The projecting pin keeps one side

Fig. 4.—Straight scissors.

raised off the table so that it is easy to place the fingers in the rings when picking up the instrument.

2040 Lincoln Avenue.

URETHRAL INJECTION OF SODIUM HYDROXID THROUGH ERROR*

Edwin Davis, M.D., Omaha

Since the introduction of phenolsulphonephthalein as a test of renal function by Rowntree and Geraghty[1] in 1909, there has been the occasion for the presence in cystoscopic rooms of a reagent for rendering the urine samples alkaline, in order to permit accurate determination of the appearance time of this drug. For this purpose sodium hydroxid has had time-honored and universal usage, partly because originally recommended by the foregoing authors and partly by reason of being the most commonly used and the most readily available alkaline reagent for laboratory use. The clinical mishap described below, following the accidental use of this drug as a urethral injection, instead of procain, affords sufficient justification for directing attention to the danger associated with the presence of sodium hydroxid in cystoscopic rooms, and for suggesting a harmless substitute.

REPORT OF CASE

History.—A man, aged 40, in fair general health, was referred for cystoscopy on account of the presence of pus cells and blood cells in the urine. Although he gave a history of being "run down," and was below par in color and weight, there were no other symptoms of importance, either urologic or systemic.

Physical Examination.—In general appearance, the patient was rather poorly nourished, and anemic. Routine examination, however, of the heart, lungs and abdomen revealed no gross pathologic changes. The urine was slightly cloudy in appearance, and microscopically showed pus cells and red blood cells. There was no albumin. Rectal examination showed a low grade chronic prostatitis. There were no other findings of importance. No blood examination was made.

Cystoscopy.—On this occasion, through the error of the nurse, the medicine glass on the sterile table, ordinarily used for procain, was filled from the bottle containing sodium hydroxid solution, 10 per cent. According to routine, using the ordinary 10 c.c. blunt nozzle urethral syringe, one barrel was injected into the anterior urethra, and followed by a second barrel in order to force the former into the posterior urethra. The patient's complaint of intense urethral pain and burning led to the immediate detection of the error. With the boric acid irrigation immediately at hand, the anterior urethra was washed out as thoroughly as possible. Since a soft rubber catheter failed to pass, the cystoscope (the most readily available instrument) was introduced for the purpose of flushing out the bladder and the posterior urethra. The irrigation of the anterior and posterior urethra was repeated with large amounts of a 0.25 per cent. solution of hydrochloric acid as soon as it was possible to prepare this solution.

The immediate developments were relatively insignificant. There appeared a grayish discoloration of the urethral mucosa and a rapidly developing edema of the prepuce; also an area of hyperemia (which later developed into superficial ulceration) on dependent portions of the scrotum. No other effects were noted. There were no constitutional symptoms.

Subsequent History.—Presenting no serious symptoms, passing urine freely, and with no visible pathologic change other than the superficial lesions mentioned above, the patient was permitted to leave the hospital late in the evening of the day of the cystoscopy. He was ambulatory for three days, receiving daily urethral and bladder irrigations of boric acid. In view of the relatively weak solution of sodium hydroxid used (10 per cent.) and the immediate and thorough flushing of urethra and bladder, it was considered, at this time, that the consequences would be no more serious than the possible subsequent development of urethral stricture. Complications set in during the fourth night, with severe chills, and elevation of the temperature to 103 F. After two or three days of improvement, the fever recurred and continued, with evidence of increasing sepsis and the physical signs of an acute bronchopneumonia. The patient died at the end of two weeks. During the course of the illness there was no suppression of urine (excepting as a terminal event), nor was there at any time evidence of mechanical urethral obstruction.

Pathology.—The essential pathologic changes, as revealed by a complete necropsy, were limited to the genito-urinary organs, the liver and the lungs.

There was necrosis of the whole thickness of the urethral mucosa throughout its length, with an extension of the suppurative process into the prostate and seminal vesicles, associated with an acute fibropurulent cystitis. Within the pelvis of the right kidney was a hard, rough calculus, about 2 cm. in diameter; and scattered through the parenchyma of both kidneys were numerous, small (from 2 to 3 mm.) metastatic abscesses. Neither kidney was enlarged. There was no inflammatory process involving either ureter. The liver likewise showed numerous small, gray-yellow areas, which on microscopic section proved to be miliary abscesses. On the surface of the lungs there was a serofibrinous exudate, and scattered through the lung tissue there were numerous small hemorrhagic infarcts, with an area of consolidation in the lower left lobe. To summarize the essential points in the complete necropsy records, the findings were such as to justify an anatomic diagnosis of pyemia, manifested by acute septic bronchopneumonia and metastatic abscesses of the liver and kidneys, in addition to the local pathologic condition of the lower urinary tract described.

COMMENT

This identical accident has happened in other cystoscopic clinics in other cities. By conversation with a few urologists since the accident, information has been obtained concerning three similar occurrences, one with a fatal termination, and the other two patients recovering without complication (other than legal). Since this information was elicited by casual inquiry and not by a circular letter, it is reasonable to conclude that the number is by no means limited to three. Furthermore, one not infrequently hears of the accidental use of other drugs in cystoscopic rooms, as, for instance, concentrated solutions of silver nitrate into the renal pelvis, or tincture of iodin instead of argyrol into the bladder. Of course, no one could be guilty of the negligence of permitting the presence of these drugs without plain labels. Therefore, as demonstrated by the foregoing accident and by other accidents cited, the plainest of labels is not an absolute guarantee of safety. It is clearly our duty to minimize the number of poisons and caustics in our cystoscopic rooms, and by eleminating those nonessential to lessen this ever present danger.

The presence of a phenol (carbolic acid) solution for instrument sterilization is justifiable, as is the presence of a solution of mercuric chlorid. With these two solutions, little occasion for confusion will arise, since they are ordinarily kept in large bottles, or in trays or basins. Silver nitrate

* From the University of Nebraska College of Medicine.

1. Rowntree, L. G., and Geraghty, J. T.: An Experimental and Clinical Study of the Functional Activity of the Kidneys by Means of Phenolsulphonephthalein, J. Pharmacol. & Exper. Therap. 1:231, 1909.

solutions are necessary, but are used relatively infrequently and may be therefore kept in an out-of-the-way cabinet. The same applies to alcohol. Tincture of iodin is not essential, and may be eliminated. Sodium hydroxid, by reason of being frequently needed, colorless and extremely dangerous, is the chief offender. Although universally used in cystoscopic rooms, this drug may be readily dispensed with, and harmless sodium bicarbonate substituted in its place. As is well known, sodium bicarbonate is but sparingly soluble in water (less than 10 per cent.), and therefore in solution is not a satisfactory agent for rendering the urine samples alkaline, on account of the buffer value of the urinary salts. The dry powder, however, admirably serves the purpose. A convenient routine is to allow the two ureteral catheters to drip into two medicine glasses, each containing one teaspoonful of dry sodium bicarbonate. The first drop of urine containing phenolsulphonephthalein will appear as a bright crimson spot on the white powder.

CONCLUSIONS

1. Constant care and plain labels do not constitute an absolute guarantee against the misuse of drugs. For this reason, nonessential drugs in cystoscopic rooms should be dispensed with, and this danger minimized.

2. Dry powdered sodium bicarbonate is a harmless and a perfectly satisfactory substitute for sodium hydroxid in determining the appearance time of phenolsulphonephthalein in the urine.

3. Attention should be directed to the far-reaching systemic effects that may follow the urethral injection of sodium hydroxid, by comparison with which the local urethral lesion comes to be of relatively trivial consequence.

520 Bankers Reserve Life Building.

MUMPS: A PRELIMINARY REPORT OF THE EFFECT OF DIATHERMY IN TESTICULAR METASTASIS

H. L. FOUGEROUSSE, M.D., GREAT LAKES, ILL.
Lieutenant, Medical Corps, U. S. Navy

Mumps, per se, means nothing more than a few days of inconvenience; but mumps, with metastasis, is an entirely different problem and exacts a quarantine period and corresponding loss of time of from three to six weeks.

It is interesting to note, in passing, that the remarkable metastasis of this specific infection, so far as the testes are concerned, has never been satisfactorily explained. Military surgeons, who see much of the disease among young recruits and are therefore best qualified to theorize, have suggested that the infecting element is transferred to the penis with the fingers, and that its ultimate transmission is along the urethra. On the other hand, during the latter part of 1918 and the early part of 1919, at the U. S. Naval Hospital at New Orleans, it was rather definitely shown that early treatment of parotid infections with convalescent serum prevented testicular metastasis.

During a recent outbreak of mumps among recruits of the U. S. Naval Training Station at Great Lakes, Ill., opportunity was afforded to test the efficacy of diathermic treatment in the metastatic cases involving the testes. About 100 cases have been admitted to the hospital. Of this number, twenty patients developed testicular complications, characterized by the usual signs and symptoms of swelling and intense pain with nausea. As discovered, these cases were immediately treated along lines in vogue in the department of urology for handling gonococcic epididymitis and allied disorders.

A Corbus clamp is used with the diathermy machine. The treatment covers a period of one-half hour each day, and precautions must be taken to prevent the elaboration of too much energy, which might accomplish one of the objects it is endeavored to prevent—sterility. Invariably, the results obtained were most satisfactory. Practically all pain subsided during the first treatment, and the progress of the inflammatory changes was arrested. Resolution was greatly hastened in all cases. Twenty-four hours after the first treatment, the clinical picture was completely changed. With suitable apparatus, treatment of the parotids or primary foci should cut short the disease before metastasis can occur.

Special Article

THE ART AND PRACTICE OF MEDICAL WRITING

IV. CONSTRUCTION OF THE MANUSCRIPT *

GEORGE H. SIMMONS, M.D.
Editor and General Manager Emeritus, American Medical Association
AND
MORRIS FISHBEIN, M.D.
Editor, The Journal of the American Medical Association
CHICAGO

(Continued from page 1045)

Ideally, the framework of a paper should be outlined before one begins to write. This framework may be in the form of headings for short, imaginative chapters, each chapter covering a subdivision of the subject. If the article is to be an elaborate one, each heading may be further subdivided. This will avoid the repetition of facts or ideas—a most common fault. A suitable title, suggestive subheads, a clear summary and cogent conclusions represent the framework of a well constructed paper.

THE TITLE

The title is of more importance than the average medical writer realizes. If an author desires his contribution to become a part of the literature on the subject, he must give it a name that will identify it—a title that is descriptive. Thousands of papers lie buried in the literature because their titles did not designate the subjects. Titles should be short, but inclusiveness should not be sacrificed for brevity. Often a long title may seem necessary, although usually it can be made short and clear by using a main title and a subtitle.

A title should be as brief as possible. No one remembers such unwieldy titles as "Brain Tumor of Psychomotor Area, Causing Jacksonian and Generalized Convulsions, Visual Hallucinations: Somatic Operation; Recovery, Mental and Physical." With that title, why write a paper? Another unwieldy example: "Erythromelalgia: Report of a Case Presenting Peripheral Vasomotor Disturbances in the Hands and Feet for Twelve Years, Reaching a Climax in Eight Years, with Recovery Following Treatment by Suprarenal Substance." These two examples are taken from published papers. The following mouthful was the original title of a section paper submitted to THE JOURNAL: "To Obtain Graphs Showing the Rapidity and Degree of Decrease in Temperature in the Eye and Orbit Produced by the External Application of a Given Degree of Cold Over a Given Area for a Given Time, and a Numerical Expression, at Least Approximate, of the Relation of These Variables to Each Other." What could a poor indexer or cataloguer do with such a title? With the author's permission, this title was rewritten thus: "On the Coefficient of Thermal Conductivity of Eye and Orbit Measured with Cold Application."

Ambiguity.—Misleading titles should be avoided. "A New Chloroform Danger" was the caption of a recent manscript. On looking up the literature on the dangers of anesthesia one would have been attracted by the title, and after laboriously hunting up the article

* This is the fourth of a series of articles. When concluded, these papers, together with additional material, will be published in book form.

would have discovered that he had been misled. The title became: "Danger in Similarity of Ether and Chloroform Containers," which stated the subject of the communication. First impressions are lasting; a catchy title catches readers. The title ought to be carefully thought out; it should give a clear indication of what is to come.

The following titles, taken from papers published in medical periodicals during 1924, are examples of ambiguity, and cause distress to those responsible for indexing medical literature:

Idle Thoughts on Medical Education.
Render unto Caesar.
Macedonian Call.
School Follicles.
Curing, from Yon to Hither.
Clinical Observations.
Foci of Infections Above Collar Bone and Importance of Their Early Recognition.
Borderline Cases.
Suggestions.
"Ideas in" Syphilology.

Subtitle.—If it is necessary to include much material in the title, it should be divided into main title and subtitle. For example, the title "A Precise and Simple Method for Counting of Blood Cells and Bacteria Without a Special Chamber" became "Counting of Blood Cells and Bacteria," with the subtitle, "A Precise and Simple Method Without a Special Chamber."

The following are examples of titles as originally given on manuscripts and as properly prepared:

THREE HUNDRED AND THIRTY LOW, CERVICAL CESAREAN SECTIONS (LAPAROTRACHELOTOMIES) WITH TWO DEATHS

LOW, OR CERVICAL CESAREAN SECTION (LAPAROTRACHELOTOMY)

THREE HUNDRED AND THIRTY OPERATIONS, WITH TWO DEATHS

A CASE OF DERMATITIS GANGRENOSA INFANTUM

DERMATITIS GANGRENOSA INFANTUM

REPORT OF CASE

STUDY OF A CASE OF ACNITIS, WITH PARTICULAR REFERENCE TO THE BACTERIOLOGIC FINDINGS

ACNITIS, WITH PARTICULAR REFERENCE TO THE BACTERIOLOGIC FINDINGS

REPORT OF CASE

FURTHER STUDIES IN ECZEMA AND DERMATITIS

ECZEMA AND DERMATITIS

ALTERATIONS IN PANCREATIC AND HEPATIC ACTIVITY IN DIABETES MELLITUS, WITH SOME OBSERVATIONS ON THE ETIOLOGY OF THE DISEASE

PANCREATIC AND HEPATIC ACTIVITY IN DIABETES MELLITUS

ALTERATIONS, WITH SOME OBSERVATIONS ON THE ETIOLOGY OF THE DISEASE

SYNDROME OF AVELLIS, WITH A REPORT OF THREE CASES

SYNDROME OF AVELLIS

REPORT OF THREE CASES

THE STUDY OF BRONCHIAL ASTHMA AND ALLIED ALLERGIC DISORDERS UNDER CONTROLLED CONDITIONS OF ENVIRONMENT, TEMPERATURE AND HUMIDITY. A PRELIMINARY REPORT

BRONCHIAL ASTHMA AND ALLIED ALLERGIC DISORDERS

PRELIMINARY REPORT OF A STUDY UNDER CONTROLLED CONDITIONS OF ENVIRONMENT, TEMPERATURE AND HUMIDITY

The Author's Name.—Much unnecessary confusion in indexing medical literature results from the fact that in different countries the authors sign their names in different manners. In France and in Germany, for example, many writers sign only their surnames; others use only initials for the first name. Sir William Osler, for instance, always signed his communications "W. Osler." Obviously, if the name is a common one, such as Smith, Brown or Johnson, and only the first initial is signed by the author, identification for indexing purposes is not easy. Many authors in foreign publications sign the name only at the close of the article. In turning pages the indexer sometimes gets the wrong writer's name for an article, omitting some articles altogether. The Italians sometimes write the given name last. The Spanish frequently follow the father's surname with the mother's maiden name, and it is difficult to tell which is the baptismal name and which the surname. For example: Dr. Remigio Salazar should be indexed as R. Salazar, under the S's, while Dr. Alvárez Sierra is Dr. Alvárez, and Sierra is to be disregarded. Then, again, some Spanish writers, for personal reasons, prefer to be known by the mother's family name, so that Dr. Angel Pérez Martín is always called Dr. Martín, and Dr. Gómez y Goicoechea, Dr. Goicoechea. Prof. Santiago Ramón y Cajal, on the other hand, signs himself Cajal, rather than Ramón. Obviously, in consulting American and English literature, the Spanish-speaking physician is at a loss, and is likely to refer to Dr. Oliver Wendell Holmes as Dr. Wendell. Our practice in recording bibliographic

literature, giving the last name first, followed by a comma and the given name, sometimes produces errors; thus, Dr. Ruth Tunnicliff is frequently mentioned in foreign indexes as Mr. Tunnicliff Ruth, and Dr. Marion Van Slyke is sometimes referred to as Dr. Van S. Marion. It is advisable for authors whose names are not widely known to sign the full name or, in any event, to adopt a consistent form and to follow it regularly.

SUBHEADS

Subheadings enable the reader to find the especial points in which he is most interested. Such center heads break up solid type pages, which repel the reader, and have an added advantage in aiding the author to present his subject logically and concisely. It is to be regretted that center heads are not more commonly used in medical and other scientific journals. The author is more competent than the copy editor to supply such subheadings. To supply these may be additional work, but it is worth while; it makes the article more attractive and thus more likely to be read.

SUMMARY AND CONCLUSIONS

The summary—a brief abstract of the article—may appear at the beginning or at the close. Not every article should be summarized. Those of more than average length (more than 1,500 words), those which involve much description of detail and technic, and those which aim at a complete survey of literature on the particular subject demand a summary. A brief digest of a long article in the introductory paragraph often will stimulate some to read the article who otherwise would not.

The conclusions—the deductions drawn from the matter presented, experiments or other facts set forth—appear at the close. Such conclusions are of special value, particularly as they lend to wider publicity. Conclusions are "fat" for abstracters and for editors who are looking for "fillers." If an author is anxious to have his conclusions reproduced by other journals, they should be rigidly condensed, yet clearly reflect his premises and deductions.

The value of the summary and the conclusions is less appreciated by the average writer than by the average reader. The busy physician looks at the title to see whether the subject interests him, glances at the subheads to see the phases considered, and then turns to the summary to get the gist of the article. If he finds that he is especially interested, he reads the whole paper.

(To be continued)

The Scorbutic Diatheses.—Scurvy, once looked on as a disease of the bone marrow, but now known to be produced by changes in the connective tissue, has been demonstrated by Aschoff and Koch to be the result of a lack of development of the cement substance between the endothelial cells of which the blood vessels are composed. The hemorrhagic manifestations characteristic of scurvy, usually in evidence where there is physiological growth or pathological irritation, are satisfactorily explained by this hypothesis, and the theories of pathologists have recently had wide clinical confirmation. . . . Subdermal hemorrhages in at least half the cases may be observed three or four months before the characteristic scorbutic manifestations are in evidence. Punctiform hemorrhages about the eyes, the mouth or on the neck are the most common. Sometimes there will be but a few petechiae, but in other cases they will appear in such numbers and so close together as to give the child the appearance of being cyanosed.—Ratnoff, H. L. *Arch. Pediat.* **42**:183 (March) 1925.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

TIMOTHY POLLEN EXTRACT-SWAN-MYERS.—A liquid obtained by extracting the dried pollen of timothy with a liquid consisting of 67 per cent. glycerin and 33 per cent. saturated solution of sodium chloride.

Actions and Uses.—See Allergic Protein Preparations, New and Nonofficial Remedies, 1924, page 244.

Dosage.—See Allergic Protein Preparations, New and Nonofficial Remedies. 1924, page 244. Timothy Pollen Extract-Swan-Myers is marketed in the following forms:

Series I: five vials containing for each consecutive dose (Nos. 1 to 5, inclusive) 2.5, 5, 10, 20 and 35 pollen units respectively, and five vials of sterile diluent with which to make the proper dilution of each dose.

Series II: five vials containing for each consecutive dose (Nos. 6 to 10, inclusive) 50, 70, 100, 150 and 240 pollen units, respectively, and five vials of sterile diluent with which to make the proper dilution of each dose.

Series III: five vials containing for each consecutive dose (Nos. 11 to 15, inclusive) 350, 500, 700, 1,000 and 1,000 pollen units, respectively, and five vials of sterile diluent with which to make the proper dilution of each dose.

Complete Series: packages containing the 15 doses, described in Series I, II and III.

Manufactured by Swan-Myers Company, Indianapolis, Ind. No U. S. patent or trademark.

Timothy Pollen Extract-Swan-Myers is prepared by grinding the dried pollen of timothy in a ball mill with a liquid, using a menstruum composed of 67 per cent. of glycerin and 33 per cent. of saturated sodium chloride solution to moisten the pollen. Then sufficient of the glycerin-sodium chloride solution is added so that the total volume is such that each Cc. represents 10,000 units; 1 unit corresponding to 0.00001 Mg. of dried pollen. This mixture is filtered through paper pulp and then through a Berkefeld filter. It is tested for sterility before diluting, after dilution and after filling.

ALLERGENS-SQUIBB (See New and Nonofficial Remedies, 1924, p. 247).

The following products have been accepted:

Bacillus Acne Allergen-Squibb; Bacillus Friedlander Allergen-Squibb; Bean (Kidney) Allergen-Squibb; Cauliflower Allergen-Squibb; Daisy Pollen Allergen-Squibb; Frog Legs Allergen-Squibb; Lentil Allergen-Squibb.

Prepared by the methods given in New and Nonofficial Remedies, 1924, p. 247.

GROUP ALLERGENS DIAGNOSTIC-SQUIBB (See New and Nonofficial Remedies, 1924, p. 258).

The following products have been accepted:

Group Allergens-Squibb Type V (Kidney Bean, Lentil, Lima Bean, Navy Bean, Pea); Group Allergens-Squibb Type XIII (Frog Legs, Lamb, Rabbit, Sweetbread, Veal); Group Allergens-Squibb Type XXIV (Corn, Golden Rod, Ragweed, Rye); Group Allergens-Squibb Type XXV (Bacillus Acne, Bacillus Coli, Bacillus Diphtheroid, Bacillus Influenzae, Bacillus Pertussis, Bacillus Typhosus, Gonococcus).

PARATHYROID GLAND DESICCATED-P. D. & CO.—The exterior parathyroids of the ox freed from fat, desiccated and powdered.

Actions and Uses.—See Parathyroid Gland, New and Nonofficial Remedies, 1924, p. 224.

Dosage.—0.006 Gm. (1/10 grain) once or twice daily.

Manufactured by Parke, Davis & Co., Detroit. No U. S. patent or trademark.

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One part of parathyroid gland desiccated-P. D. & Co. represents approximately ten parts of the fresh gland tissue. It contains approximately 0.0048 per cent. of iodin in organic combination. On incineration it yields not more than 7 per cent. of ash.

ILETIN (INSULIN-LILLY) (See New and Nonofficial Remedies, 1924, p. 152).

The following dosage form has been accepted.

Iletin (Insulin-Lilly) U-80, 10 Cc.: Each Cc. contains 80 units.

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SATURDAY, APRIL 11, 1925

LARGE AND SMALL BRAINS

Apparently, mankind is prejudiced in favor of heavy brained persons. This view was bluntly expressed at a recent conference by a physician who averred that it is generally recognized that men with large heads seem to represent the intelligentsia of man, although this does not mean necessarily that a smaller headed man may not be quite as keen in his intellectual processes.[1] Superiority and size do not always go together in other anatomic relations in the body. It is true, of course, that a muscle such as the biceps, capable of high grade contractile performance, is likely to be larger and heavier in the case of a powerful person than in the physically weak; but a heavy person is not necessarily superior to one of less weight, who has dispensed with several pounds of superfluous fat. The tissues of the human organism may be interpreted in terms of quality as well as of quantity. In the development of the brain, the sequence of events is quite fixed.[2] At birth the brain is composed of neurons, most of which have ceased to divide; but there are still some dividing cells, most numerous in the cerebellum. This phase is completed during the first part of the second year, and with the completion of the development of the cerebellum comes the ability to walk. At this time the number of neurons forming the system, a number that is characteristic for the species, becomes complete, and the subsequent growth of the brain depends mainly on the enlargement of the formed elements.

Donaldson[3] has established the fact that tall persons have heavier brains than shorter ones. The differences may amount to as much as 18 per cent. As the number of neurons in the human brain is characteristic for the species and is fixed within biologic limits, the conclusion follows that heavy brains are heavy because the neurons composing them are larger, and also that they tend to be more complex because of the size of the neurons composing them.

Those of us who are endowed with smaller stature and presumably with brains of lighter weight may content ourselves with the thought that, at any rate, we can probably match our large brained neighbor, neuron for neuron. Donaldson, though he is tempted from a statistical standpoint to assume a better performance on the part of the heavy brained group, nevertheless leaves a ray of hope for the undersized. The large brain composed of large neurons may thereby be structurally somewhat more complex, he remarks, but in the consideration of mental ability it is necessary to remember that the abundance of the blood vessels, the character of their walls, the composition of the blood, the perfection of drainage and, above all, the quality of the protoplasm forming the neurons are characters that must be considered. Who can tell us the secret of developing the quality of cerebral protoplasm?

1. Graves, W. W., in discussion on Donaldson, H. H.: The Significance of Brain Weight, Arch. Neurol. & Psychiat. 13:387 (March) 1925.
2. Donaldson, H. H.: Growth Changes in the Mammalian Nervous System, Harvey Lectures 1916-1917, Philadelphia, J. B. Lippincott Company, 1918, p. 147.
3. Donaldson, H. H.: The Significance of Brain Weight, Arch. Neurol. & Psychiat. 13:385 (March) 1925.

THE BLOOD AT HIGH ALTITUDES

There was a time, not long ago, when the physiology of altitude was essentially academic in interest, the chief practical aspects of the subject being those that pertained to the sport of mountain climbing or an occasional balloon ascension. This attitude has been changed, now that man has taken up flying. The conquest of the air in the last two decades has made him a frequent traveler in the upper reaches of the atmosphere, where his altitude may actually be measured by miles rather than a few hundred feet. Of late there has been a renewal of enthusiasm for mountain exploration, which has exhibited its utmost difficulties in the attack on the highest Himalayas. Life at such heights requires physiologic compensations and readjustments; and it has become the province of science to discover what they are and how they may be accomplished.

Despite the other variables of environment at higher ranges, it is today recognized that the controlling element in the physiologic reactions is, to quote Schneider,[1] who has made extensive studies in this field, the diminished partial pressure of oxygen and the consequent imperfect aeration of the arterial blood. He, too, is responsible for the statement that much of the investigation of altitude and anoxemia has been partially or wholly futile because of unsatisfactory experimental methods. This is revealed in articles full of contradictory theories and conclusions. It is now commonly believed that the erythrocyte count and the hemoglobin content of the blood increase definitely after a brief stay at a high altitude. This

1. Schneider, E. C.: Physiological Effects of Altitude, Physiol. Rev. 1:631 (Oct.) 1921.

would obviously be an advantageous physiologic adjustment for promoting the intake and transport of oxygen under conditions of lowered barometric pressures. However, the statement of this long recognized increase in the number of erythrocytes has not remained unchallenged.

A recent writer has remarked that even if we accept as established facts the physiologic changes just referred to high altitude, a variety of possible explanations remain. One may attribute the increment in red cells and hemoglobin values to shrinkage of the plasma volume, to redistribution of cells lying inactive in the marrow, spleen or other sinuses, or to a true increase of red cell and hemoglobin volumes. In 1921, Schneider believed that undoubtedly the increase in hemoglobin observed, during short exposures to and during the early days at high altitudes, is largely or wholly due to a loss of fluid from the blood, while the permanent condition of acclimatization is the result of a new formation of red cells which finally restores the blood volume to normal. Meanwhile it has become possible to make more accurate determinations of two of the factors—the volume of blood plasma and the volume of the red cells—on the basis of which a more tenable conclusion may be established. Observations on man made by a party [2] from the University of California Medical School at an altitude of 11,000 feet in the Sierra Nevada Mountains have given clear-cut answers. In harmony with earlier evidences, the red cell count and the hemoglobin increased almost proportionately throughout, reaching in three weeks a maximum of between 10 and 15 per cent. above the sea level value. The blood volumes, however, were found to be little disturbed during a month's residence at high altitude; consequently, the changes noted must have been due to the production of more erythrocytes rather than to any redistribution of blood cells in the circulation. As earlier investigators have noted, the blood values return gradually to their normal values on resumption of life at sea level.

THE PITUITARY GLAND

The modern interest in the functions of the hypophysis cerebri was stimulated above all by the studies initiated by Pierre Marie forty years ago, when he attempted to discover the association of the pituitary structures with acromegaly. These early investigations were based, for the most part, on observations of pathologic change. Since that time, the problems involved have been approached by direct experiment. Through the development of a skilful surgical technic, it has become possible to expose the hypophysis during life, so that it can be subjected to partial or complete extirpation, or to stimulation in a variety of ways. Operative intervention of this sort is not easily brought about; and when it is accomplished, difficulties of localization often present themselves. The adjoining nervous structures have proved to be particularly susceptible to injury. Some of these occasions for confusion were recently mentioned [1] during a discussion of the pathogenesis of diabetes insipidus. It now appears that the chronic polyuria so often referred to damage of the hypophysis may in reality be attributable to injuries involving the hypothalamus in the region of the pituitary stalk.

The writers who attempt to depict the functions of the pituitary structures have become more cautious in statement as the technic of the experimental study of the gland activities has become perfected. It has become traditional to distinguish between the possible physiologic rôles of the anterior and of the posterior lobe. Regarding the latter, Howell [2] has lately summarized our positive knowledge as limited to the fact that it produces a substance that has a marked pressor, diuretic and oxytocic effect. Whether this substance enters the blood and exerts its influence on the tissues remains to be proved, and speculation as to its hypersecretion or hyposecretion must be received with caution. Howell, who has reviewed the subject for the series of articles on glandular therapy recently published, frankly admits that the death following complete removal of the anterior lobe, as well as the cachexia, inhibition of growth, adiposogenital dystrophy, polyuria and disturbance in carbohydrate metabolism that were said to result from extensive injuries to the lobe may all be referable to lesions of the neighboring hypothalamic cortex. Until this point is settled definitely, he adds, much that has been assumed with regard to the functions of the anterior lobe will have to be held *sub judice*. Nevertheless, it is still possible to read in widely used current textbooks that "the loss of the entire hypophysis is fatal after a short interval." [3]

A recent article [4] recalls that many years ago Sir Victor Horsley expressed the view that the pituitary gland is not essential for life. Then for many years investigators threw doubt on this view, but it seems now that his conclusions were correct. At any rate, Sachs and Macdonald [4] of the Washington University Medical School in St. Louis have observed that complete removal of the pituitary of animals, if the hypothalamus is not injured, does not lead to the death of the animal. Deaths that occurred were always associated with hypothalamic injury. These

2. Smith, H. P.; Belt, A. E.; Arnold, H. R., and Carrier, E. B.: Blood Volume Changes at High Altitude, Am. J. Physiol. 71: 395 (Jan.) 1925.

1. The Hypothalamus and Diabetes Insipidus, editorial, J. A. M. A. 84: 753 (March 7) 1925.
2. Howell, W. H.: Physiology of the Pituitary Gland, J. A. M. A. 83: 1684 (Nov. 22) 1924.
3. For example, Stiles, P. G.: Human Physiology, Ed. 3, Philadelphia, W. B. Saunders Company, 1922, p. 388.
4. Sachs, Ernest; and Macdonald, M. E.: Blood Sugar Studies in Experimental Pituitary and Hypothalamic Lesions, Arch. Neurol. & Psychiat. 13: 315 (March) 1925.

new experiments also confirm our recent comments on the polyuria due to such damage. Investigations of this character should warn us further against drawing direct conclusions regarding the physiologic rôle of certain glands during health from observations on the pharmacodynamic effects of extracts or actual chemical compounds derived from them by the biochemist. Such hasty generalizations have already been responsible for confusion and unwarranted theses in relation to the suprarenals as well as the hypophysis. It may not be amiss, further, to accept the warning of the experimental neurologists that future workers must pay much greater attention to the hypothalamic region as a center of vegetative and nervous functions. In surgical work in this region, they remind us, the involvement of the hypothalamus in any given case must be carefully considered as regards both prognosis and operative indications.

Current Comment

CAN INSULIN REPLACE THE PANCREAS?

Each successive discovery of an important physiologic hormone produced by a specific organ in the body has been followed by expectations that might readily be challenged on mature deliberation. The isolation of the highly potent epinephrin led many persons early to identify its physiologic action with the function of the suprarenal structures from which the product is derived. Similarly, thyroxin became synonymous in the minds of many with thyroid secretion; and often, recently, insulin has too hastily been supposed to represent the contribution of the pancreas. The test of all these hypotheses obviously consists in attempting to ascertain whether suitable administration of the isolated hormones in question will entirely avert such disaster or detriment as may ensue from loss of the glands that produce them. In the case of insulin, considerable disappointment attended the earlier trials. For example, Fisher,[1] working at the University of Chicago, made numerous observations on totally pancreatectomized dogs. Through use of insulin they could be kept alive for some time, but the normal body weight could not be maintained; and even when the insulin doses were so regulated that little or no sugar appeared in the urine, the polyphagia, and some polyuria, was present. Fisher consequently concluded that insulin probably does not represent the entire pancreatic hormone complex, since, in the total absence of the pancreas, insulin cannot maintain life or does not control all the diabetic symptoms, such as subnormal weight, polyphagia and polydipsia. Fisher believed that the marked degeneration of the liver, and the extreme arterial sclerosis developed in dogs on long insulin management, indicate either diabetic processes not controlled by insulin, chronic toxic action of insulin itself, or such toxic action of the other substances in the insulin mixture. A clue to the difficulty seems to have been secured by the Toronto group,[2] which also had earlier experienced these failures. By adding a daily allowance of raw pancreas to the diet, reinforced by insulin after pancreatectomy, the animals have been kept in a perfect condition of nutrition. Hence, it is concluded that the presence of something derived from the pancreas, either its digestive ferments or some internal secretion besides insulin, is necessary for the maintenance of normal metabolism. It is regarded as not unlikely that the absorption from the intestine of toxic breakdown products of protein is responsible for the damage to the liver when no trypsin is present. In the human pathology of diabetes, it rarely happens that the external secretory function of the pancreas is entirely lacking; consequently, the extreme of experimental pancreatectomy represents a condition presumably almost never ensuing in human cases of insulin shortage.

1. Fisher, N. F.: Attempts to Maintain the Life of Totally Pancreatectomized Dogs Indefinitely by Insulin, Am. J. Physiol. 68: 140 (March) 1924.

2. Chaikoff, I. L.; Macleod, J. J. R., and Markowitz, J.: Further Data on the Metabolism of Depancreatized Dogs Kept Alive with Insulin, J. Biol. Chem. 63: 71 (Feb.) 1925.

BOVINE PUERPERAL INFECTIONS

The relation of contagious abortion in cattle to Malta fever in human beings was discussed in last week's issue of THE JOURNAL.[3] Recently the section on comparative medicine of the British Royal Society of Medicine[4] considered the question of puerperal infection of cows, a condition usually associated with retention of the placenta. When the placenta is removed manually in from one to two hours following labor, and an examination is made, a pure culture of colon bacilli is found. If, however, twenty-four hours has elapsed between labor and the removal of the placenta, a vaginal discharge is observed, and the placenta gives a culture of colon bacilli overgrown with saprophytes. Usually at this period a few streptococci are found; if there are many streptococci, a severe toxemia develops. The longer the placenta is retained, the more foul is the vaginal discharge and the more serious is the condition of the animal. When the constitutional symptoms have become severe, the bacteriologic examination of the placenta reveals increasing numbers of streptococci. Veterinarians recognize this disease entity in cattle, but have no name for it. It has a recognized tendency to affect the cows on certain farms, just as streptococcal puerperal fever in women formerly found harbor in certain maternity hospitals. Since there is rarely any interference in the labor of cattle, the presence of pathogenic organisms in the placenta cannot be attributed to the manual introduction of foreign matter. It has been suggested that the alternate contractions and relaxations of the puerperal uterus, both in human and in bovine cases, creates a suction that draws contaminated vaginal secretions into the uterine cavity. This would explain the occurrence

3. Human Infections with Bacillus Abortus, editorial, J. A. M. A. 84: 1047 (April 4) 1925.

4. Pugh, L.: Puerperal Sepsis in Cattle, Proc. Roy. Soc. Med., Sec. Comp. Med. 18: 31 (March) 1925.

of the saprophytes and streptococci in the latter stages of bovine puerperal fever, but would not explain the early presence of the colon bacillus in the placenta. If the *Bacillus coli* infection is hematogenous, the conditions in animals are unlike those in human beings, since puerperal infection rarely occurs in women who have suffered with colon bacillus pyelitis of pregnancy.[5] *Bacillus abortus* infection in cattle may also give rise to fever following labor. In these cases the severe streptococcal infection does not follow.

ALKALI THERAPY IN DIABETES

The attitude of the medical profession toward the use of alkalis, notably sodium bicarbonate, in the treatment of severe diabetes has been experiencing a marked change during the last decade. For example, in 1907 a writer in the first edition of Osler's Modern Medicine stated that when "acidosis," that is, ketosis, supervenes, the carbonate or bicarbonate "should be given by mouth, rectum and intravenously, in enormous quantities." He directed that as much as from 4 to 8 gm. (from 1 to 2 drams) of sodium bicarbonate, every hour, by mouth, if deglutition is still possible, and double this quantity by rectum every two hours, should be administered. We are also told that more effectual results will follow an intravenous alkaline injection. In contrast with such heroic measures, one may now find recommendations of far less rigorous alkalization even to the extreme reverse of Joslin and others, who have entirely abandoned the administration of sodium bicarbonate to diabetic patients for combating ketosis. The advocates of this nihilism point to many dangers and disadvantages of alkalis. Overdosage has led to tetany.[6] The problem of administration is often difficult; and there is the disconcerting discovery that the constant use of an alkali tends to promote the constant excretion of acid substances. Wigglesworth[7] has recently pointed out that so long as the increased excretion of acetone bodies which such treatment evokes was regarded as a mere "washing out" of these substances, there was no evidence that the alkali was actually harmful to metabolism. Haldane, Wigglesworth and Woodrow[8] observed that the disturbances in carbohydrate metabolism induced by large doses of bicarbonate were in many respects so like the metabolic disturbances of diabetes as to suggest that the alkali might well accentuate the disease. The studies[7] in the Cambridge Biochemical Laboratory on the relation between alkalosis and ketosis show that so far as concerns the metabolism of fat in the absence of carbohydrate—which is the problem always before the patient with diabetes—large amounts of alkali have a definitely inhibitory influence. Such facts must henceforth be taken into consideration when the use of alkali therapy is debated.

5. Falls, F. H.: Contribution to the Study of Pyelitis in Pregnancy, J. A. M. A. 81:1590 (Nov. 10) 1923.
6. Harrop, G. A., Jr.: Bull. Johns Hopkins Hosp. 30:62 (March) 1919.
7. Wigglesworth, V. B.: Studies on Ketosis, I, The Relation Between Alkalosis and Ketosis, Biochem. J. 18:1203, 1924.
8. Haldane, Wigglesworth and Woodrow: Proc. Roy. Soc. London, B 96:15, 1924.

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Held in Chicago, March 9, 10, 11 and 12, 1925

(Continued from page 1053)

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ESSENTIALS OF AN ADEQUATE EXAMINATION

Principles and Methods Underlying Adequate Achievement Measures

MR. DONALD G. PATERSON, Minneapolis: I have attempted to contrast the discursive, essay type of examination which has typified the examinations given by state medical examining boards with the short answer, multiquestion, objective type of examination which is now being experimented with and adopted in many colleges, universities, high schools and other examining agencies, such as the United States Civil Service Commission, the College Entrance Examination Board and the Board of Examiners of the New York City Board of Education. The principles underlying adequate achievement measuring scales must be reviewed and an effort made to demonstrate how the new type examinations are based on these principles. Such principles have been developed from thorough-going studies in the field of mental measurement, and give us for the first time what may be termed a science of measuring human capacities, abilities and achievements. The measurement of achievement in medicine falls within this field and presents an opportunity for the state medical examining boards to reorganize their examining methods by incorporating these new type, objective examinations in future licensing examinations. I have prepared examples of various forms of new type questions, and a discussion of the necessary precautions, together with rules for the formulation of new type questions, will be presented. There is no intent to criticize the methods of state medical examining boards, but rather to call attention to recent discoveries in the field of measurement which can be applied to medical examinations so as to enable still further progress in our system of state examinations for those who would practice the science and art of medicine.

Fundamental Medical Sciences

DR. F. C. WAITE, Cleveland: The student should consider an examination as an inspection of progress, an opportunity to see in the questions a careful judgment of relative values by one thoroughly familiar with the subject itself as a whole and with the relation of that one subject with cognate subjects. To the teacher, the examination is of much value to enable him to judge of the adequacy of his teaching and of the accuracy of his judgment in setting the examination. The announced examination is of less value than the unannounced. The examination for license to practice is entirely different from any of those connected with the institutional training of the student. Its object is quite different; therefore, its scope and procedure should be different. The average state board examiner has failed to comprehend the difference in both object and content between the examination for licensure and the examination within the medical school. The primary function of the medical licensing board is to ascertain whether an applicant is competent to practice medicine. It reaches its conclusions from evidence coming from two sources—the candidate, his history and his school, and the licensing examination. Obviously, an applicant cannot be asked questions concerning all the facts he should know; but it must be ascertained whether he knows how to get the facts he needs. The following question asked of a candidate would give more light on whether he is safe to practice medicine than does any one of the questions usually asked: "Assuming you are to locate in a town of 3,000 people at

least 100 miles from any large city, what medical books would you consider it necessary to have in your office when you begin to practice? Give authors, titles and approximate date of publication." One might add to this a question concerning what medical journals he would consider necessary to receive regularly. This would indicate whether the candidate is likely to keep abreast of progress in medicine. Another element of safety in a physician is judgment. A question as to what the candidate would do in some condition—not an emergency—that requires high degrees of skill which would not be attempted by the general practitioner, would bring out whether he knows enough not to attempt to do the things that are beyond his ability. Another essential in a safe practitioner is resourcefulness. A question as to what he would do in a certain emergency would test this quality. The licensing board should test a man's knowledge so far as it applies to his competence for the general practice of medicine, but this does not include minutiae in the fundamental sciences. Their study has cultural value; they teach the student to observe; they furnish facts and relations on which the clinical subjects are based. The licensing examination should regard the rôle of the fundamental sciences in the medical curriculum and confine itself to those phases of these sciences that apply to those parts of clinical medicine which the general practitioner is likely to be called on to use. The examination should consider these sciences only in correlation with their clinical application. Examinations should not only test memory but the ability to correlate, to reason, to apply knowledge. In anatomy, questions dealing with clinical application are fully as good a test of knowledge as to ask for the insertion, innervation, etc., of a muscle or a description of the brachial plexus. In embryology, questions pertinent to obstetrics may be asked. In physiology, questions on the normal activity of major functions should be asked. A knowledge of bacteriology may be tested by questions involving sepsis, sanitation and public health. In pathology, the examination should aim to ascertain whether the applicant can think in terms of pathology on problems of clinical medicine. Pathology is the basis of clinical medicine, but it is not the province of the licensing board to determine with regard to the more remote details. That is the requirement for the pathologist. The licensing board must distinguish between the knowledge of pathology to be demanded of the general practitioner and that to be required of the specialist in pathology. My plea is that first of all questions in the fundamental medical sciences be selected on the basis of their applicability to clinical medicine, and next that the questions be so couched that the correlation of abstract knowledge with its application is thoroughly tested, that is, ask problem questions. The licensing examination should test not only the knowledge of the candidate but also his mental and intellectual powers.

Clinical Medical Sciences

Dr. David L. Edsall, Boston: The method of examination employed at Harvard Medical School I think is superior to any other method I have seen tried. The general examination students clearly understand the necessities in order to graduate. Only the stray man who has escaped deserved elimination up to that stage, or the unusual one who lacks capacity of this sort to such a degree that he is not equipped as yet to be free to practice, must take the examination. They are given a written examination purely in order to see how well they can coordinate information from various sources toward a definite object in view. They are given a long time to answer these questions—half a day on one question. We would be perfectly willing to to let the man have access to the library in order to answer the questions. They are of such a character that only in slight ways could he help himself in covering up ignorance. He must have had a good training and done his work well to be able to answer. Mere reviewing is not sufficient to meet the situation. All men who are candidates for honors are given oral examinations, and all men whose passing is in doubt are given oral examinations. This is a difficult examination to carry out. It requires a good deal of thought in setting the questions. We have teams of three to read each book. Those three men represent the clinical branches and one or other of the medical sciences. If one team is in doubt, it turns the book over to another team for a decision. Trained examiners are needed in this work. We have had about twenty-two men on the so-called examining committee, and they are getting more and more experienced every year. After five years of experience with this plan, the students express themselves to the effect that this is the fairest and most effective method of examining. We do not ask enough of our students. The student and the examining board bring pressure on the faculty to think and to teach along this line. The clinicians carry the largest responsibility. They must meet the situation. Furthermore, this is the most graphic method of studying the weak and the strong parts of the school. It is a method of dissecting your own course. This method is an application of what educators have done before, multiplied in order to fit medical conditions. It has been useful; it can be made still more useful. There are probably other methods, but this is a method of meeting the essential purpose; namely, to try to see that the student is not merely a penny in the slot machine when he gets through, but a thinking machine.

Medical Licensure

Dr. Irvin D. Metzger, Pittsburgh: Six years ago, Pennsylvania abandoned the midterm examinations because we felt that the fundamental sciences were being taught so well that it was farcical for us to attempt to quiz into them. Therefore, we have attempted in our examinations merely to elicit facts regarding the fundamental sciences through their application clinically. Examinations have always been needful in order to determine the efficiency of any particular training in which the possessor might have special opportunity for its use in the community. Schools should be the mainspring in the medical chronometer by which new medical ideas are evolved, evaluated and finally established; state boards should be the balance wheel in controlling this educational mechanism. When schools were run for profit, educational standards had to be maintained by outside legalizing boards, which checkmated their commercial policies. With recognized standards faithfully followed and with legal oversight of the work and the final examinations by boards, the scholastic training of graduates from practically all American medical schools should be acceptable without any additional licensing examination. To determine the ability of the graduates to adapt their scholastic training to the clinical needs seems yet to demand an examination. Internships in approved hospitals operating under a common standard and under the supervision of the board of the state in which the hospitals are located would seem to suffice for even this clinical practical examination. Frequent critical and constructive oversight of medical schools and of hospitals, while much more difficult, would be productive of greater efficiency in the college output and would help to secure for our states practically trained sensibly minded and whole souled guardians of health.

Written Versus Practical Examinations

Dr. Walter L. Bierring, Des Moines, Iowa: The prevailing tendency is to grade schools and their systems of teaching by the published examination results. The percentage of failures in state board or other qualifying examinations often constitutes the principal means by which the standard of a particular school is obtained. In medical schools the principle generally accepted is that instruction and examination should go hand in hand, so that the final tests are but an amplification of the series of examinations connected with the general routine of study. Yet even then in the final grading, some of the best men fall by the wayside. Except in a few states where a practical or oral test is added, the state board examination consists only of a written test, which should be considered in analyzing these results. The National Board of Medical Examiners of the United States has established a qualifying examination comprising both a written and a practical test, and during the nine years since its organization the average percentage of failures has been about 15. Its candidates are supposedly the cream or the pick of recent graduates from high grade medical schools. The

type of examination set by the national board is acknowledged to be representative of the highest standard of medical training in this country. All published results clearly indicate to what extent the teacher and student, or both, are out of touch with the examiner. It is possible that our methods are at fault. Certainly, some relief is needed in order to promote a better harmony between examinations and the present scheme of education.

To test the descriptive ability of a candidate has always been regarded as one of the best criteria of knowledge of the subject under discussion. The written test furthermore permits a better expression of general schoalrship, and exhibition of proficiency in penmanship, spelling, composition and neatness of execution, which are always desirable accomplishments in a physician properly qualified for his profession. A strong argument advanced in its favor is that it constitutes a written record, which is valuable for future reference. While the written method has definite limitations, the opportunity that it offers in testing knowledge is not appreciated to its fullest extent. Frequently it is confined mainly to definitions, the citation of facts in physiology and pathology, the names of muscles, or the listing of chemical formulas. As a memory test it may serve a purpose, but such information can readily be obtained by reading and attending lectures. As none of the arts can properly be tested by a written examination, so in medicine the written test is insufficient to test the ability to carry out methods of work or apply these methods in the treatment of disease. While the written method may indicate the degree of instruction of the candidate, it is not possible to ascertain whether he is able to practice medicine. Therefore, in justice to the public, it cannot justify its use as the only means of licensure examination. Licensure examiners are often handicapped by legislative enactments, which require that the examination be done in a certain manner.

The written answer should always be a testimony of applied knowledge. In a medical qualifying test there is no place for the fundamental medical sciences as separate examinations. As such, they serve no special purpose and only add an unnecessary burden. The present mode of medical teaching is concerned largely with applied knowledge, which predicates an oral examination, practical laboratory work, and the demonstration of clinical examinations at the bedside. As the painter must be able to paint, so the fitness of a candidate to practice medicine can be properly determined only by the addition of a practical examination. It seems fitting to emphasize that the written examinations should be simplified in every possible way, that applied knowledge cannot be properly estimated without a practical test, and that an adequate qualifying examination is best exemplified by a combined written and practical test.

MARCH 11—AFTERNOON

ESSENTIAL PRINCIPLES OF A MEDICAL PRACTICE ACT

Functions of Medical Practice Act

DR. WILLIAM C. WOODWARD, Chicago: As a background for the papers that are to follow, it is well to have in mind the true purpose of all medical practice acts. Such an understanding is necessary, too, to the intelligent drafting, enactment and enforcement of any such act. In principle, a medical practice act does not differ from a pure food act, a poison act, an act fixing standards for weights and measures, and similar legislation; and the function of all is the same. All have for their object the protection of health, safety and property, by regulating standards of service as between man and man. Every such act seeks to establish within its own field the minimum standard of service compatible with the common welfare, and in the common interest to enforce compliance with the standard thus established. Every detail of examination, licensing, refusal and revocation of licenses, and prosecution is merely an incident in the larger purpose of the act. The government puts its seal of approval on every physician whom it licenses just as truly as it puts its seal of approval on every set of weights and measures it passes, and on every dairy farm it licenses, as evidence of conformity to standard. It does this in order that the people may be assured an adequate standard of service in time of sickness and injury. It is a public purpose, and it is just as much the duty of law enforcement officers and of the courts to enforce the medical practice act, through which the government seeks to accomplish this, as it is their duty to enforce any other act whatever.

Eligibility for License

DR. CHARLES B. PINKHAM, San Francisco: The applicant should come from a school approved by the board, the first two years of which offer the same curriculum to the physician and surgeon as to the drugless practitioner, owing to the possibility of the drugless practitioner's later aspiring to the physician's and surgeon's certificate. Missouri's deplorable condition, resulting from the emasculation from the medical practice act of the power of approval of schools, is a shining example of taking from the board of medical examiners the "power of approval." The chartering of medical schools is a most important factor in the question of "approval," and is quite as important as fixing the standard of licensure. "America for Americans" is apparently being rapidly adopted by state boards as a slogan now that so many foreigners are seeking the right to practice in our country, many states demanding that they become American citizens as a prerequisite for admission to examination. Equally important is the demand that the examination be written in the English language. The completion of at least one year's internship should be required before admission to examination, thus assuring a more competent licentiate. The applicant for reciprocity offers our most difficult problem, made more so by the disclosures of the operation of the National Diploma Mill, which has peddled to purchasers preliminary education certificates, premedical education certificates, medical diplomas and state licenses, and, regardless of care exercised in investigating the credentials of reciprocity applicants, many instances have come to light in which persons have obtained reciprocity registration on credentials that later have been proved fraudulent. The question of good moral character is a fast developing essential for consideration, for in this classication fall those who have been convicted of such offenses as violation of the Harrison Act, and frequently are reported to other state boards as having no previous record of misconduct.

Methods of Enforcement

DR. H. M. PLATTER, Columbus, Ohio: The constitutions of the several states differ markedly, and therefore a method of procedure which gives a fairly prompt trial in one state cannot be adopted in another. The solution of this problem is therefore legal. The incorporation of quo warranto procedures in the penalty section of medical practice acts is advisable. Injunction procedure is proving itself a remedy worth while. Both these procedures possess the advantage of promptness of execution. Criminal prosecution is a routine procedure that should be included in all penalty sections with particular care to see that the trials be had without innumerable delays and appeals. In Ohio an amendment to the existing penalty section was enacted in 1919 by which offenses under the medical practice act were made misdemeanors and punishable by a fine. For a second offense the penalty was a fine and imprisonment. The results achieved have been gratifying. The plan is to be recommended. I would suggest the incorporation in our revocation section of a provision for a suspension of license. We have employed suspension for a period varying from one to six months with very satisfactory results. These procedures are sound and in line with judicial procedures. Our present practice usually is in the ordinary case one of suspension and discipline for the first offense, to be followed by revocation of license for subsequent offenses. A fundamental requirement for improvement of present conditions will be a single standard for all who would treat the sick, with a general minimum requirement preliminary and professional for entrance to the examination for certificate to practice. My appeal is for as great uniformity as state constitutions permit in the penalty sections of their medical practice acts, with particular attention to promptness in execution; for a single standard of qualifications; for educators, physicians and

health officials to educate constantly the public through all the agencies at their command. An enlightened public will demand law enforcement.

Diagnosis and Treatment

MR. HARRY EUGENE KELLY, Chicago: All persons who treat the sick as an occupation should be required to measure up to the same reasonable scholastic plane, be subjected to one and the same just standard of knowledge and skill, and be required to pass the same tests in the same fundamental subjects, before being permitted to try to heal the sick according to any method of treatment whatever, because all of them initially are expected to do the same thing. No other system is at once so logical, just and humane. The state has no interest in the cults, but has a vital interest in educated, skilful, honest physicians able to diagnose and distinguish between the various ailments and to direct the application of all remedial agents thereto. When acts regulatory of this occupation shall be written, apart from the influence of healing cults on legislators, exclusively on the basis of the public health, they will embody this principle. Then they will be not only right but permanent.

(To be continued)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARIZONA

Dr. Pusey Speaks at Bisbee.—A reception and luncheon will be given by the chamber of commerce, Phoenix, April 15, in honor of Dr. William Allen Pusey, President, American Medical Association, who will deliver an address; Dr. Pusey will go then to Tucson to speak at a dinner arranged by the chamber of commerce, and, April 16, will address the thirty-fourth annual session of the Arizona Medical Association at Bisbee on "The Situation in the Treatment of Syphilis."

CALIFORNIA

Carver Gibson Arrested.—Albert Carter, a special agent of the state board of medical examiners, filed a complaint against Watts Carver Gibson, Los Angeles, March 12, charging him with violating the medical practice act. When Gibson was arrested forty-eight boxes and bottles of medicine, a stethoscope and blood pressure apparatus were found in his handbag, which bore the inscription, "W. C. Gibson, M.D." There is no Watts Carver Gibson in the American Medical Directory. Gibson ostensibly taught a course of orthopedic movements. There is an old case pending against him in the Los Angeles police court, filed in 1923, in which he was never apprehended, although a warrant was turned over to the sheriff's office while Gibson was in jail charged with reckless driving.

Resolution on Medical Radio Broadcasting.—The council of the California Medical Association, at its annual meeting at Long Beach, adopted this resolution on medical broadcasting:

WHEREAS, Medical radio broadcasting, because of the great distance covered, is fraught with grave dangers to many lay listeners because of subject matter not applicable to local conditions, and

WHEREAS, To keep medical radio broadcasting impersonal and in conformity with the ethics of the American Medical Association is almost impossible; and

WHEREAS, Human nature is such that medical radio broadcasting is almost certain to be abused by certain medical men; now, therefore be it

Resolved, That the Council of the California Medical Association holds:

First, that no radio bureaus established for medical broadcasting be inaugurated or participated in by members of the California Medical Association except under permission of and with the observance of such rules as the "Medical Radio Broadcasting Committee of the California Medical Association" may promulgate in regard thereto.

Second, that no question and answer service department be conducted as a part of any medical radio broadcasting service; and

Third, that a copy of this resolution be sent to the American Medical Association and every county medical society, and the attention of such organizations called to the dangers incident to medical radio broadcasting.

CONNECTICUT

Fund for Work on Scarlet Fever Serum.—Mrs. Philip J. Goodhart, New York, and her son, a graduate of Yale, have presented $5,000 to Prof. Francis G. Blake, of the department of internal medicine, Yale University Medical School, New Haven, to enable him to continue work on the standardization of serum for the treatment of scarlet fever.

HAWAII

Personal.—Dr. Frederick E. Trotter, president of the board of health of Honolulu, and Lyman H. Bigelow, superintendent of public works, have recently been in California inspecting mental hospitals. Honolulu plans to build a $600,000 hospital for the insane.

ILLINOIS

Society News.—Dr. Williams McKim Marriott, dean of Washington University School of Medicine, St. Louis, addressed the Madison County Medical Society, Edwardsville, April 3, on "Child Feeding."

Chicago

Hospital News.—The contract has been let for the $1,000,000 addition to the Augustana Hospital.——Passavant Hospital will not receive patients after May 1. This hospital will conduct a drive for $1,000,000 for a new building.

Society News.—Dr. Hugh Young, Baltimore, will address the Chicago Medical Society, April 29.——Dr. Harry E. Mock, among others, addressed the Chicago Society of Industrial Medicine and Surgery, April 6, on "Trauma and Malignancy."——Dr. William R. MacAusland, Boston, addressed a joint meeting of the Chicago Orthopedic Club and Railroad Surgeons at the University Club, April 10, on "The Present Status of Arthroplasty."——The Chicago College of Dental Surgery of Loyola University will celebrate its forty-second anniversary with an alumni clinic program, April 13-14, at 1747 West Harrison Street. Class reunions will be held, April 13, at the La Salle Hotel.

Y. M. C. A. Student Dormitory.—West side professional schools more than reached their goal of $100,000, in March, for the new West Side Student Y. M. C. A. This, with $50,000 raised by the students themselves and $50,000 donated by Dr. Truman W. Brophy, makes $200,000 toward the $750,000 building to be erected at Congress and Wood streets. The schools participating were Rush Medical College; the medical, dental and pharmacy schools of the University of Illinois; the Chicago College of Medicine and Surgery, and the Chicago College of Dental Surgery. Each of ten physicians provided one $1,500 room in the new building, as did the staff of the Norwegian-American Hospital.

American Legion Endowment Fund.—The American Legion is conducting a campaign to raise an endowment fund of $5,000,000, the income of which will guarantee a perpetual financial basis for the Legion's program of rehabilitation and child welfare. The American Legion is working to restore to health every man who suffered wounds, disease and shock incident to war. Intended to supplement the work of the government, the American Legion Rehabilitation Service will go on so long as there is a legionnaire. In providing a home for the orphan of every man who fell in the nation's service, the Legion seeks the assistance of every established agency devoted to child welfare, and to all such it will give assistance. The physicians of Cook County have been asked to contribute to this endowment fund a total of $25,000. Dr. John S. Nagel, 25 East Washington Street, is chairman of the medical division.

IOWA

Annual Medical Clinic.—The University of Iowa College of Medicine, Iowa City, held its fourteenth annual medical clinic, April 7-8. Clinics were conducted on a wide range of subjects by members of the university hospital staff, and addresses were made by Dr. James B. Herrick, Chicago, and Dr. Harris P. Mosher, Harvard University Medical School, Boston.

KENTUCKY

Scarlet Fever Epidemic.—Five deaths were reported in a scarlet fever outbreak in the fortnight preceding March 22, by the director of the Daviess County Health Department.

Physician Arrested.—Dr. Herman F. Whited, Owensboro, was arrested and placed in jail, March 25, on a charge of

murder following the death of a patient, on whom, it is reported, he performed an illegal operation.

State Warns Against Smallpox.—After a careful study of the smallpox situation in Kentucky by the U. S. Public Health Service, the state board was advised to inaugurate a campaign for universal vaccination as provided by law, and such recommendation was broadcast by the board. Smallpox is prevalent, it was said, in every section of the state, and there is actual danger of any unvaccinated person contracting the disease.

Personal.—The county board of health, Bowling Green, March 17, elected Dr. Walter C. Simmons of Smiths Grove, president, and Dr. Charles E. Francis, Bowling Green, secretary-treasurer.——Benjamin C. Gruenberg, New York, managing director, American Society for Medical Progress, was entertained at dinner by a number of local physicians in Lexington, March 27, on which occasion he gave addresses at the University of Kentucky and at Transylvania University.

LOUISIANA

Society News.—The New Orleans Ophthalmological and Oto-Laryngological Society's meetings this year will be held at the Eye, Ear, Nose and Throat Hospital, at 8 p. m., the third Thursday of each month. Dr. Theodore J. Dimitry has been elected president and Dr. Valentine H. Fuchs, secretary.

Hospital News.—It is reported that the members of the Touro Infirmary and Hebrew Benevolent Association recently voted to issue $650,000 in bonds, $350,000 of which will be marketed at once to provide for expansion, and the remainder kept until the public donates a like amount, when it will be used in further expansion.

Physician Arrested.—Dr. Elias I. Persinger, Mansfield, was recently arrested and released on a $2,500 bond to await the action of the federal grand jury, on a charge of violating the Harrison Narcotic Law. Dr. Persinger is the eighth physician, it is reported, to be arrested by federal agents since the alleged exposé in and around Shreveport in February.

MARYLAND

Society News.—Dr. Arthur G. Barrett has been elected president of the West Baltimore Medical Association; Drs. James Dawson Reeder, Robert P. Bay, Martin F. Sloan and John F. Hogan, vice presidents; Drs. Gustav Goldman and Arthur C. Tiemeyer, secretaries, and Dr. Leonard A. Richardson, treasurer. Dr. Lewellys F. Barker was made honorary president.

Mental Clinic at Hagerstown.—A mental hygiene clinic under the direction of the State Board of Mental Hygiene was opened at the Medical Centre Building, Hagerstown, April 9. It will be in charge of Dr. Henry S. Mitchell, director of the Foster Clinic, Spring Grove State Hospital, and Fannie C. Haines, director of county mental hygiene clinics, Board of Mental Hygiene.

Personal.—Dr. Warren H. Hoak, medical officer in charge, U. S. Public Health Service, Customs House, Baltimore, has tendered his resignation, effective April 27, and will return to private practice in Baltimore.——Dr. Arthur P. Herring, state commissioner of mental hygiene, addressed the Washington County Medical Society, Hagerstown, April 2, on "The Organization and Functions of a Mental Hygiene Clinic in Washington County."——Dr. Joseph C. Bloodgood, surgeon in chief, St. Agnes Hospital, Baltimore, and associate professor of surgery, Johns Hopkins Medical School, was tendered a dinner by the staff of the hospital on his return from a trip to Egypt.——Dr. James H. Ullrich, Baltimore, has accepted a commission as colonel in the medical corps of the Officers Reserve Corps, U. S. Army.——Dr. Frankwood E. Williams, New York, spoke on "The Place of Mental Hygiene in a Program of Public Health," before the School of Hygiene and Public Health, Johns Hopkins University, Baltimore, March 16.

MASSACHUSETTS

Christian Science Practitioner Made Army Reserve Chaplain.—Irving G. Wickman, Springfield, a Christian science practitioner, has been commissioned as a Christian science chaplain in the Officers' Reserve Corps of the First Corps area.

Personal.—Dr. Sidney S. Listernick has been appointed city physician of Everett.——Dr. Harry D. Gafney has been chosen a member of the board of health of Ware.——Dr. Ross V. Patterson, dean of Jefferson Medical College, Philadelphia, was recently tendered a dinner by the local alumni of that school at the Copley-Plaza Hotel, Boston.

Artemas Ward Estate to Harvard.—Under the will of the late Artemas Ward, the residue of his estate, after giving his son $1,000,000, and making other bequests, goes to Harvard University. The estate is estimated at between $2,000,000 and $3,000,000. The extent to which the university will benefit depends on the future success of the business of the Ideal Cocoa and Chocolate Corporation and the Listerated Gum Corporation, whose products are marketed largely in penny-in-the-slot machines. The decedent was the great grandson of General Artemas Ward, who graduated from Harvard in 1748, and was the first commander in chief of the colonial armies.

MICHIGAN

Chiropractor Fails to Report Smallpox.—B. A. TePoorten, Pontiac, a chiropractor, was arrested, March 23, on complaint of the health officer and arraigned in municipal court on a charge of failing to report a case of smallpox to the health department.

University Bequeathed Library Fund.—From the estate of the late Silas Wright Dunning, New York, for many years editor and chief owner of *Railway Age*, the University of Michigan, Ann Arbor, will receive $375,000 to be used to purchase books and periodicals for the university library. Mr. Dunning gave one twentieth of his estate outright and three fourths of the principals of various trust funds to the university, after the death of the life beneficiaries.

MINNESOTA

Hospital News.—The Minnesota Hospital for Crippled Children has changed its name to the Gillette State Hospital for Crippled Children, in honor of the late Dr. Arthur J. Gillette, St. Paul, who was largely responsible for its establishment.

Child Health Day.—St. Paul will celebrate its fourth annual Child Health Day, April 25. The exercises this year will concern problems of behavior and discipline as they affect health. The sessions will be held at the auditorium, the morning being reserved for children.

MISSOURI

St. Louis Society in Charge of Tornado Relief.—At the request of the American Red Cross, the St. Louis Medical Society has taken charge of medical and nursing aid in the tornado area. The president, Dr. Fred W. Bailey, stated, March 24, that medical needs were being promptly met, badly injured patients were well cared for in local hospitals or had been evacuated to hospitals in other cities. Calls for volunteers will be sent out officially in accordance with the request of the Red Cross. Following an inspection by the president and secretary of the St. Louis Medical Society, five members were sent into the devastated area.

Society News.—Dr. George F. Dick, Chicago, will address the St. Louis Medical Society, April 14, on "Scarlet Fever."——The hospital committee of the St. Louis Medical Society is holding private hearings on Tuesday afternoons at the Medical Society Building to obtain information as to the existing conditions in hospitals. Members, clinics and hospitals have been requested to present such information as they may think helpful in improving the relations between the medical profession and hospitals and clinics, for the mutual benefit of all concerned.

Licenses Revoked.—The state board of health announced, April 2, the revocation of the licenses of Dr. Anna Golstein, St. Louis, and Dr. Thomas R. Moore, Maplewood. The Golstein case was heard by the board, April 1. Dr. Golstein was charged, it is reported, with swearing falsely that she was born in St. Louis when, in fact, she was born in Russia; that she was examined as to her preliminary education by W. P. Sachs, whereas she purchased the Sachs' certificates from Robert Adcox; that she attended the St. Louis College of Physicians and Surgeons for four years, whereas she did not attend four years. Dr. Moore was charged with swearing falsely that he attended the Dickinson County high school at Chapman, Kan., and the St. Louis College of Physicians and Surgeons for four years, whereas he did not attend either institution for a period of four years. The state revoked also the licenses of Dr. Hugo L. Baepler and Dr. Adolph M. Krall, both of St. Louis. They were found guilty of swear-

ing falsely concerning attendance at the St. Louis College of Physicians and Surgeons, and, in the case of Krall, as to his examination in preliminary subjects. According to the St. Louis *Star*, William P. Sachs said that Krall came to him in 1916 for a preliminary certificate, saying that it must be dated back to 1914 to fit his record at the St. Louis College of Physicians and Surgeons. Sachs gave the certificate to Krall, who at that time attended the National University of Arts and Sciences, which is now defunct. Krall's attorney introduced an undated certificate, which Sachs denied issuing. The board sent for a microscope, which showed that an erasure had been made on the certificate near the space for the date.

NEW HAMPSHIRE

Scarlet Fever Epidemic.—The state board of health notes in its March bulletin that there were fifty-eight cases of scarlet fever in the New Hampshire School for Feeble Minded Children at Laconia, after Dec. 15, 1924. Beginning January 1, the Dick test was administered to 415 persons. Of these 286 were negative, thirty-two doubtful and ninety-seven positive. Scarlet fever toxin was then given to the positive cases, each person receiving 125 skin test doses first; seven days later 250 skin test doses, and seven days later 250 skin test doses. Persons over 15 years of age received 500 skin test doses at the third inoculation. In the seven day period between the first and second inoculation, eleven children developed symptoms of scarlet fever, and in the seven day period between the second and third inoculation five children developed scarlet fever. After the third inoculation was given, three children had mild attacks of typical scarlet fever. Among those showing a negative Dick test twenty-four hours after the test was given, five have since developed scarlet fever. In all there were thirty-four cases which developed before Dick testing and twenty-four after Dick testing: sixteen among those who had a positive Dick test and eight among those having negative Dick tests. By means of this test the positive children have been separated from the negative. Seventeen per cent. of the positive patients thus separated and inoculated developed scarlet fever; 2.8 per cent. of those with negative reactions have developed scarlet fever. Of the sixteen patients comprising the 17 per cent. positive, nine developed scarlet fever after but one dose of the prophylactic toxin had been given. During the last part of the scarlet fever epidemic, fifty cases of German measles also developed, ten of which were in children who recently had had scarlet fever.

NEW JERSEY

Hospital Burned.—The Englewood Hospital was practically destroyed by fire, April 5. None of the 110 patients were injured.

Dr. Ill Honored.—Preceding the fifth anniversary meeting of the Academy of Medicine of Northern New Jersey, Newark, March 18, a dinner was given in honor of Dr. Edward J. Ill, on the occasion of his fiftieth anniversary in the practice of medicine. Dr. Howard A. Kelly, Johns Hopkins University Medical School, Baltimore, classmate of Dr. Ill, spoke on "Ideals of Medicine" at the academy meeting. Other speakers were Dr. Lucius F. Donohoe, Bayonne, president of the Medical Society of New Jersey, Dr. Clarence R. O'Crowley, Newark, president of Essex County Medical Society, and Dr. John F. Hagerty, a trustee of the academy. Dr. Ill is a past president of the Medical Society of New Jersey and of the American Association of Obstetricians and Gynecologists, and was the first president of the academy.

NEW MEXICO

Smallpox in Lea County.—Five cases of smallpox were reported, March 30, from Lea County, one from Chaves and one from Torrance. None of these seven patients had ever been vaccinated. The five in Lea County were in one family.

NEW YORK

Charity Patient Leaves Fortune.—The appraisal of the estate of Louis T. Lehmeyer, New York, who died in 1923, a charity patient in the Metropolitan Hospital, Welfare Island, gave a valuation of $417,251. Of this amount $37,000 was bequeathed to charitable organizations about New York. The bulk of the estate was left to the grandchild of one of Mr. Lehmeyer's friends.

Health of Child Workers.—In a survey of child workers made by the state industrial commissioner, about half of the children between 14 and 15 years of age were found to have physical defects, which were aggravated by the work they were doing. About one fifth of the children had visual defects, one eighth had enlarged tonsils, and 4 per cent. had heart affections. Half of the children with flat feet had to be on their feet the greater part of the day.

Legislative Season Closed.—The New York state senate adjourned, March 27, without passing the Dunmore bill. The measure, therefore, in which the legislative bureau of the Medical Society of the State of New York was greatly interested, was not enacted although it had been passed by the assembly. The various cultists' bills, namely, the Nicoll chiropractic bill, the Esmond healing arts bill, the Jenks chiropractic bill, the Bolton chiropractic bill, the Fearon bill and the Boulon chiropractic bill were never reported out of committee. The amendment to the Workmen's Compensation Law, which would have provided for the free choice of physician, did not pass; the bill requiring the licensing of private institutions for the treatment of drug addicts died in committee in both houses, as did the bill for the qualification of examiners in lunacy. Senate bill 530, providing for cleanliness in the shellfish industry, died in committee, and a concurrent bill in the assembly was lost. Senate bill 693 concerning the admission of foreign practitioners died in committee. Senate bill 1123 pertaining to foreign licenses passed both houses and is in the hands of the governor. The bill in opposition to birth control, introduced in the senate, died in committee, as did the birth control bill in the assembly.

Report of Committee on the Nurse Question.—The Erie County Medical Society adopted the report of its committee appointed to study the nursing situation, March 16. The committee, comprising Drs. George R. Critchlow, Thew Wright, Irving M. Snow, DeWitt H. Sherman, James A. Gardner and Earl P. Lothrop, all of Buffalo, considered that the claim as to a shortage of nurses was substantiated; that there was abundant evidence of the increasing unwillingness of many registered nurses to nurse in private homes, and that at least one result of the twelve hour schedule is to work great financial hardship on the sick public, the majority of whom are unable to meet the expense involved. The committee found evidence of an increasing tendency on the part of some registered nurses to exercise the function of a physician rather than a nurse in her relation to patients and considered that while this was true of but a minority, the attitude is apparently growing. The present system of training, the committee said, lays emphasis on the larger sphere of the professional woman, and the expanding curriculum tends to educate nurses beyond the point of practical usefulness in their actual work. The high requirements in training make for dissatisfaction with the financial returns received and debar many women of high character and ability who formerly chose nursing from sheer love of the work. The committee recommended that the preliminary educational requirements of applicants for training be reduced to a grammar school education, emphasizing character, ability and enthusiasm for the work; that the curriculum be modified so as to require two years of practical bedside training, and that at the end of the second year the pupil be graduated as a qualified nurse. The committee would arrange a curriculum for a third year of training for those who so elect to prepare them for public health nursing, institutional work and other activities, rather than actual bedside care of the sick, and would require a high school education for the advanced degree.

New York City

Eighth Harvey Lecture.—Dr. Wilhelm Kolle, professor of medicine, University of Frankfort-on-the-Main, and director of the state institute of experimental therapeutics, will deliver the eighth Harvey Society lecture at the New York Academy of Medicine, April 18, on "The Abortive Cure of Syphilis in the Light of Experimental Studies."

Resolutions of Birth Control Conference.—At the Sixth International Neo-Malthusian and Birth Control Conference, held in this city, March 25-31, resolutions asking the League of Nations to study birth control as a means of preventing war and urging organized labor to support the movement for the sake of better living conditions were adopted.

Day Clinic for Police.—A completely equipped roentgen-ray room and day clinic has been formally opened at police headquarters. Dr. Ernest Fahnestock presented the clinic equipment. The roentgen-ray room was fitted up with funds supplied by August Heckscher and Frank Phillips. Police-

men will be able to obtain treatment at the clinic from 11 to 4 o'clock daily except Sunday. It is estimated that the clinic will save policemen $300,000 annually in medical fees.

Demonstration Eye Clinic.—The National Committee for the Prevention of Blindness has established a demonstration eye clinic in cooperation with the Clinton Neighborhood Conference, at 413 West Forty-Sixth Street, which will be held Wednesday afternoons under the direction of Dr. Henry Robertson Skeel. The National Committee is undertaking this clinic to determine the "sight condition" of an unselected group of preschool children, and to demonstrate what can be done by a neighborhood association in conserving the sight of children.

Volunteer Health Force.—A public health reserve corps is being organized by Dr. Frank J. Monaghan, health commissioner, to take the place of the Sanitary Reserve Corps. The new corps will have broader powers. Membership is open to any reputable citizen, and invitations to join have been sent to all classes, including laborers, employes of industrial corporations and members of civic organizations. Members will take an oath to uphold the Constitution of the State of New York and the Sanitary Code, and will receive an appropriate badge. It will be their duty to call the attention of offenders to violations of the Sanitary Code and to cooperate with the health department in public sanitation.

Tuberculosis Among the Poor.—The first report of the combined activities of the New York Association for the Prevention and Relief of Tuberculosis and the Association for Improving the Condition of the Poor, conducted under the name of the latter organization, show that while tuberculosis deaths in New York City have decreased 67 per cent. in the last twenty-five years, tuberculosis is still responsible for more than half of the total expenditure required for the relief of dependent families. A total of $108,743 was utilized in assisting families, one or more of whose members had tuberculosis. Forty per cent. of the fatherless families under the care of the association were fatherless because of tuberculosis. The tuberculous families cared for during 1924 numbered 690, comprising 1,320 adults and 2,249 children. Among those on the committee of the combined organizations are Drs. James Alexander Miller, Linsly R. Williams, Louis I. Harris, Frank J. Monaghan, Mrs. Herman M. Biggs and Cornelius N. Bliss.

Opportunities for Graduate Study.—The committee on medical education, New York Academy of Medicine, has prepared a series of synopses of approved opportunities for graduate medical study in New York City, which will soon be published for distribution. The synopses cover dermatology and syphilology, obstetrics and gynecology, internal medicine, neurology and psychiatry, ophthalmology, otolaryngology, pediatrics, surgery, urology and orthopedic surgery. A bureau of clinical information is maintained at the Academy of Medicine, 17 West Forty-Third Street, where information is available regarding opportunities for graduate medical study in New York, in other cities of the United States and abroad. The bureau will answer inquiries concerning internships, residencies, graduate courses in medical schools and teaching hospitals, and extension courses. The bureau publishes a *Daily Bulletin of Surgical Clinics* which will be mailed free to visiting physicians on request. A *Weekly Bulletin of Medical Clinics* is also published. A book of the fixed clinics of Greater New York, with a transportation guide, has been prepared and is furnished without charge to visitors whose stay in the city is limited.

NORTH CAROLINA

Personal.—The governor has appointed Dr. James C. Grady, Kenly, and Dr. Allen McLean, Wagram, trustees of the State Normal School at Fayetteville.

University Improvements.—The executive committee of the State University Board of Trustees recently provided for the expending of the $800,000 appropriated by the last legislature for a building program during the next two years.

Post Graduate Courses.—The University of North Carolina, extension department, announces plans for another session of the Postgraduate School for Physicians. This school began functioning in North Carolina in 1916 under the state board of health, in cooperation with the county medical societies. Last year an instructor visited Pinehurst, Durham, Sanford, Hamlet, Lumberton and Fayetteville, and another instructor visited Rutherfordton, Shelby, Charlotte, Concord, Gastonia and Lincolnton one day a week for twelve weeks, to give courses in pediatrics.

Society News.—The medical staff of the U. S. Veterans' Bureau at Oteen has organized a medical society, Colonel Whitledge, commanding officer, being honorary president; Dr. David Kramer, president; Dr. George S. Spence, vice president; Dr. Frederick C. Locke, secretary, and Dr. Vernon L. Mahoney, treasurer.——Drs. Albert Anderson, Raleigh, president, North Carolina State Medical Society; Vonnie M. Hicks, councillor, and John B. Wright, Raleigh, visited the Alamance County Medical Society, March 19, Dr. Anderson delivering an address on "Mental Hygiene." Dr. Paul C. Brittle and Ralph E. Brooks, of the county society, gave a heart clinic.

NORTH DAKOTA

Bill to Tax Hospitals.—A bill was introduced in the recent legislature of North Dakota providing that hospitals which refused to permit any physician, surgeon, "doctor or chiropractor," holding a license to practice in the state, to enter or practice in said hospital, shall be subject to taxation the same as any other private institution. This bill failed to pass by a small margin.

OHIO

Chiropractor Fined.—Charles Younger, Celina chiropractor, has pleaded guilty to a charge of practicing medicine without a license, it is reported, and has been fined $25.

State Board Appointments.—The governor recently appointed Dr. John R. Shoemaker, Cuyahoga Falls, Dr. Lee Humphrey, Malta, and Dr. T. Addison McCann, Dayton, members of the state medical board.

Hospital News.—St. Alexis Hospital, Cleveland, is to build an addition costing $260,000 which will be a memorial to the late Mother Leonarda.——A site has been selected for a marine hospital building at One Hundred and Twenty-Fourth Street and Fairmount Boulevard, Cleveland.

Personal.—Dr. Oliver R. Eyler, Rainsboro, has been appointed health commissioner of Pike County to succeed the late Dr. George B. Nye.——Dr. Charles H. Hamilton has resigned as health commissioner of Lancaster.——Dr. Andrew J. Timberman has succeeded Dr. Charles S. Means as head of the eye, ear, nose and throat department of the White Cross Hospital, Columbus. Dr. William P. Smith has been appointed chief of the surgical staff.

Medical Legislation.—The legislature adjourned, March 28, until April 16, having passed about sixteen out of 100 proposals pertaining to public health. Among the bills that passed both houses was one to remove the "waiver clause" in the limited practice act so that all limited practitioners who practiced for five years previous to 1915 must take an examination for license, unless they have already complied with the law; one to permit county commissioners to pay the operating expenses of city general hospitals where municipal funds are insufficient—this bill has been signed by the governor; one to provide for the registration of all dentists in the state every five years; another to raise the fee for pay-patients in state institutions from $3.50 to $5.50 per week; another to provide a system of county zones for the eradication of bovine tuberculosis through the tuberculin test, and another to provide special school classes for deaf, blind and crippled children.

PENNSYLVANIA

Two More Mental Clinics.—The Bureau of Mental Health, Pennsylvania Department of Welfare, Harrisburg, announces the establishment of two more clinics. The Washington clinic is held on the first Friday of the month at the American Red Cross headquarters, Dr. Ralph L. Hill of Woodville being the consulting psychiatrist. The Carlisle clinic is held at the Welfare Federation headquarters on the third Friday, and Dr. Edward M. Green of Harrisburg is the consultant. Psychologists are furnished by the bureau. These clinics make a total of thirty-nine now conducted under the auspices of the bureau of mental health.

Philadelphia

International Dental Conference in 1926.—The seventh international dental conference will be held in Philadelphia, Aug. 23-28, 1926, in connection with the Sesqui-Centennial Exhibition (THE JOURNAL, July 28, 1923, p. 307). The congress represents 42,000 dentists in twenty-nine nations.

Auxiliary Organized.—More than 100 wives of Philadelphia physicians, March 25, enrolled as charter members of the women's auxiliary to the Philadelphia County Medical

Society. Mrs. L. Webster Fox was elected president. Dr. Arthur C. Morgan, president of the county medical society, has offered the auxiliary the use of the headquarters at 2046 Chestnut Street.

Joint Meeting.—A special joint meeting of the New York and Philadelphia Obstetrical societies will be held at the Ritz-Carlton Hotel, April 14. The fellows of the New York Society will be the guests of the Philadelphia members; clinics will be held throughout the day. At the scientific meeting, held immediately following the dinner, Dr. William P. Healy, New York, will speak on "Carcinoma of the Uterus; Treatment by Irradiation." The discussion will be opened by Drs. Floyd E. Kenne and George E. Pfahler.

Hospital News.—Thomas Conway, Sr., has donated a plot of ground valued at $50,000 for the proposed hospital in Upper Darby Township. The hospital will be nonsectarian, and citizens and clergymen of every faith are active in its promotion. Approximately $400,000 will be required to build and equip the hospital. To raise necessary funds, a drive will be inaugurated, May 1.——A $1,500,000 campaign is to be started next month to provide funds for the construction and equipment of a new building and additional endowment for the Presbyterian Hospital. The new building will contain about 125 beds.

Personal.—Dr. William G. MacCallum, Baxley professor of pathology, Johns Hopkins University Medical Department, delivered the annual Conversational Lecture of the Pathological Society of Philadelphia, in the College of Physicians, April 9.——Dr. John B. Carnett, professor of surgery in the University of Pennsylvania Graduate School of Medicine, has been elected president of the board of trustees of the North American Sanitarium for the Treatment of Surgical Tuberculosis at Ventnor, N. J.——Dr. John W. Croskey has announced his intention of retiring shortly from the staff of the Philadelphia General Hospital, with which he has been associated since 1901.——Dr. Harvey Wiley, Washington, D. C., addressed the Philadelphia County Medical Society, April 8, on "The Importance of Diet to Health and Vitality."

RHODE ISLAND

Smallpox in Central Falls.—Seven cases of smallpox were reported for the week ending April 1 at Central Falls and Cumberland. The state board of health ordered the entire force of a large plant, in which the outbreak is said to have originated, to be vaccinated.

SOUTH CAROLINA

State Medical Meeting.—At the annual meeting of the state medical association, Spartanburg, April 21-23, there will be a symposium on cancer and one on hookworm disease. Among many of those who will address the meetings will be Dr. Stewart R. Roberts, Atlanta, president, Southern Medical Association, and Dr. Irvin Abell, Louisville, Ky., president, Southern Surgical and Gynecological Association. The alumni luncheon will be April 22, and the state health association meeting, April 21. The state pediatric society and the eye, ear, nose and throat society will hold meetings as usual. Headquarters will be at the Cleveland Hotel.

TEXAS

Frederick Cook Begins Sentence.—Having failed in his appeal, Dr. Frederick A. Cook, Fort Worth, departed for the federal penitentiary, April 5, to begin a sentence of fourteen years and nine months for fraudulent use of the mails in connection with the sale of oil stock.

Hospital News.—Work will begin soon on the construction of another unit for All Saints Hospital, Forth Worth, to cost $175,000.——The governor signed a bill authorizing the sale of the American Legion Memorial Hospital, near Kerrville, to the federal government, for about $1,700,000. Should the government agree to pay that amount, $200,000 will be turned over to the American Legion as a trust fund for the benefit of disabled ex-service men.

VIRGINIA

Hospital News.—The Fauquier County Hospital was formally opened, February 26.——The Memorial Hospital, Lynchburg, plans to build a second unit to provide fifty additional beds.——Construction has been started on the $250,000 memorial hospital at Danville.——The contract has been awarded for the erection of an addition to Piedmont Sanatorium, Burkeville.

Dr. McGuire Resigns.—William T. Sanger, Ph.D., secretary, state board of education, has been elected president of the Medical College of Virginia, Richmond, to succeed Dr. Stuart McGuire, resigned. The appointment is on a full-time basis. Dr. McGuire, president since 1914 and at the same time an active practitioner in medicine, advocated the change and will continue to serve as a member of the executive committee. Dr. Sanger received his Ph.D. degree from Clark University in 1915. He has been an instructor at the University of Utah, the State Teachers' College, Harrisonburg, secretary of the State Teachers' Association and editor of the *Virginia Journal of Education*.

PHILIPPINE ISLANDS

Lepers Collected and Discharged.—The total number of lepers collected at different points in the islands by the health service, from Aug. 28 to Oct. 11, 1924, was 438, of which eighty-five were from northern provinces, fifty-six from Mindoro and Bical provinces, 169 from the Visayan Islands, and thirty-eight from Mindanao and Sulu. Twenty-six negative lepers were brought from Culion leper colony to San Lazaro Hospital, Manila, making as of Sept. 20, 1924, a total of 232 negative lepers registered at Culion. Five more negative lepers were sent to San Lazaro Hospital from Culion, Oct. 20, 1924.

Examination of School Children.—A physical examination to detect communicable disease and physical defects was recently conducted for children who were to be admitted to primary, intermediate and high schools in the islands. Among 10,237 children examined, 36 per cent. showed no physical defects or disease; 4 per cent., or 500, had some so-called "excludable" diseases, of whom 310 had trachoma; 5 per cent., or 593, had enlarged tonsils; 40 per cent., or 4,240, had dental caries, and 7 per cent., or 80 children, had scabies. Dr. S. Luna Orosa says in *The Journal of the Philippine Islands Medical Association*, that these results are a good index to the physical condition of the city school children in the whole Philippine Islands.

CANADA

Society News.—Dr. Daniel N. Eisendrath, Chicago, will address the Western Ontario Academy of Medicine, London, Canada, April 21, on "Bladder Neck Obstructions."

Personal.—Dr. N. B. Dryer, formerly of University College, London, has accepted an appointment in the department of physiology, Dalhousie University, Halifax, N. S.——Dr. Augustus Robinson, Annapolis Royal, recently celebrated his eighty-ninth birthday. Dr. Robinson is still in practice.——Dr. Jonathan C. Meakins, director of the new medical clinic at McGill University Faculty of Medicine, Toronto, recently established by the gift of a half million dollars from the Rockefeller Foundation, addressed the Toronto Academy of Medicine, April 7.

GENERAL

Indian Nursing Service.—The inauguration of the Indian Public Health Nursing Service by the Minnesota State Department of Health has resulted in the adoption of an Indian nursing service by the state as a permanent policy and the provision of a tuberculosis sanatorium for Indians only. The state department of health of Wisconsin has adopted a similar program.

International Council of Women.—The sixth quinquennial meeting of the International Council of Women will be held in Washington, D. C., May 4-14. Women from forty-two countries will attend. The subjects for discussion will include education, public health and child welfare. The five previous quinquennial meetings of the council have been in Christiania, Rome, London, Geneva and Berlin.

Medical Groups in Museum.—Four miniature groups representing scenes in a mobile surgical hospital in the Argonne have been installed in the American Red Cross Museum in Washington, D. C., besides a large panoramic model of the hospital opened to the public a year ago. The groups are the work of the sculptor, Dwight Franklin, each depicting a separate phase of the treatment of the wounded.

Bulletin on Child Management.—The Children's Bureau will soon issue a bulletin entitled "Child Management" the author of which will be Dr. Douglas A. Thom, director of the habit clinics of Boston and of the division of mental hygiene of the Massachusetts Department of Mental Diseases. The

chapters will be "Habits," "The Parent," "Feeding," "Jealousy," "Fear," "Anger," "Sex Instruction" and "Environment."

Grading Schools of Nursing.—A conference was held, March 4, by representatives of the American Medical Association, American Red Cross, the American College of Surgeons, the American Hospital Association, and representatives of general education, at which it was voted that the grading of schools of nursing should be undertaken as soon as possible and be directed by a joint committee empowered to appoint representatives from the general education field and from the public.

National Hospital Day.—May 12, the birthday of Florence Nightingale, will be celebrated again this year as National Hospital Day. The governor general of Canada has been requested to be honorary chairman this year. The primary object of National Hospital Day is to acquaint the public with the present day hospital, and efforts will be made this year to attract as many visitors as possible. The superintendent of the Tacoma Hospital, Tacoma, Wash., Mr. C. J. Cummings, is chairman of the National Hospital Day Committee.

Conference on Child Guidance.—The Division on Prevention of Delinquency, National Committee for Mental Hygiene, held a conference in Cleveland, in February, which was attended by representatives of the Commonwealth Fund, members of the staffs of the Cleveland Demonstration Child Guidance Clinic, the Children's Memorial Clinic of Richmond, the Louisville and Cincinnati Mental Hygiene clinics, and child guidance clinics of Dallas, Memphis, St. Louis, Minneapolis, St. Paul, and Los Angeles, and by other representatives. The conference was called to consider questions of administration, community organization, clinical technic and other problems confronted in developing this field of mental hygiene.

League of Nations.—At a meeting of the Malaria Commission of the League of Nations, Geneva, March 23, a program was drawn up for the investigation of malaria in Egypt, Palestine, Syria, Turkey, Sicily, Corsica and Spain, from May to September. A similar investigation has been made in Italy, the Balkans and Russia. A delegation to the first International Malaria Congress in Rome in October was appointed. The value of quinin and cinchona alkaloids in combating malaria was discussed.——Under the auspices of the League Health Board, inspectors of labor from ten countries met for the first interchange of information relating to industrial hygiene, and after the conference left for Belgium, France, Great Britain and Holland to study methods of hygiene applied in those countries.——The interchange of medical health officers, which has been touring England, concluded in Geneva, March 25.

Prevention of Accidents.—The National Safety Council has just published an illustrated pamphlet, "Teaching Safety to New Employees." It is edited by seventy-five safety engineers, is nontechnical and aims to teach safety just as soon after employment as possible. Education and supervision, the council says, are the only effective methods of preventing the greater number of accidents. Inquiries should be addressed to the National Safety Council, 168 North Michigan Avenue, Chicago.——The Michigan State Safety Conference was held at Grand Rapids, March 23-24, under the joint auspices of the safety councils of various cities and societies. The subjects for discussion were wood-working hazards, accident prevention in the public utilities and paper and pulp industries and fire protection.——A safety conference was held at Newark, N. J., March 16, under the auspices of various city safety councils and the National Safety Council.

American Stomatological Committee for Europe.—This committee will leave the United States, June 13, to meet in joint session with leading European stomatologic and dental associations in Paris, Rome, Milan, Bologna, Zurich, Berlin, Oslo (Christiania) and London. The aim of the committee is to study the status of stomatology in these countries, with regard to educational facilities for undergraduate and graduate instruction in clinical stomatology, the basis for cooperation between stomatologists and dentists, the activities in mouth hygiene from the point of view of public health and the legal status of stomatologic and dental practice. The next International Stomatological Congress will be in 1928. The committee consists of Alfred J. Asgis, D.D.S., New York, chairman; Elmer C. Chambers, D.D.S., Warren, Ohio; Ferdearle J. Fischer, D.D.S., Trenton, N. J.; John L. Kelly, D.M.S., New York; Noah Philip Norman, M.D., New York.

Society News.—At the meeting of the Association for the Study of Internal Secretions, Ambassador Hotel, Atlantic City, May 26, there will be a symposium, the numbers of which will include addresses by Dr. Leonard G. Rowntree, president, on "The Evaluation of Therapy with Special Reference to Organotherapy"; Edward C. Kendall, Ph.D., on "Chemistry of the Active Principle of the Glands of Internal Secretion"; Graham Lusk, Ph.D., "Metabolic Disturbances in the Glands of Internal Secretion"; Dr. James H. Means, "Circulatory Disturbances in the Glands of Internal Secretion"; Dr. Charles M. Campbell, "Psychical and Neurological Disturbances in Diseases of Glands of Internal Secretion," and Dr. George W. Crile, "Surgery of the Glands of Internal Secretion." The general discussion will be opened by Drs. Henry S. Plummer, Eugene F. Du Bois and Roy G. Hoskins.——The John A. Andrew Clinical Society, for the advancement of negro physicians, held its fourteenth annual clinic at the Tuskegee Institute, Alabama, April 5-9, under the presidency of Dr. W. H. Brummitt, Chicago.

FOREIGN

Fewer Medical Students in Germany.—There was a total of 13,489 medical students in Germany in the winter term 1922-1923, says the *Deutsche medizinische Wochenschrift*, of whom 1,736 were women and 2,204 foreigners. In the summer of 1924 there was a total of only 9,316 students, of whom 1,373 were women. There were 1,962 foreigners, of whom 280 were women.

Medical Practice Law in Finland.—The new law regulating the practice of medicine went into effect in January. Foreign candidates must present equivalent credentials and pass an examination by the medical faculty at Helsingfors. Certain provisions restrict the number of foreigners when deemed necessary. The law is summarized in the *Finska Läkaresällskapets Handlingar*, February, 1925.

French Alienist Acquitted.—Dr. R. Dupouy, a prominent Paris alienist, active in the movement for mental hygiene, was sued recently by the state because he had placed persons, alleged to be insane, in an open general sanatorium. The French law (1838) requires that the insane be treated in insane asylums. Dr. Dupouy was acquitted, the judge emphasizing that the term "insane" must be restricted to a condition in which the subject is dangerous to himself or others and liable to interfere with public order.

National Tuberculosis Conference.—The eleventh annual conference of the British National Association for the Prevention of Tuberculosis will be in London, July 6-7, the main subject under discussion being "Tuberculosis in Childhood." Professor Pirquet, University of Vienna, will deliver the address introductory to the discussion. The afternoon of July 7 will be devoted to addresses on the treatment of tuberculosis by "Sanocrysin," by Dr. Holger Møllgaard, professor of physiology, Royal Veterinary and Agricultural College, Copenhagen, and Prof. Knud Faber, of the University of Copenhagen. The meetings, which will be at the Royal Society of Medicine on Wimpole Street, will be open to all persons interested in tuberculosis on payment of a fee of one guinea.

Personal.—The first award of the Sir Robert Jones medal and British Orthopedic Association prize of £50 has been made to Mr. G. Perkins, assistant surgeon, Royal National Orthopedic Hospital, for his essay on "The Diagnosis, Treatment and End-Results of Tuberculous Disease of the Hip Joint."——Prof. L. Asher, of the chair of physiology at Berne, has accepted the invitation of four Spanish universities to deliver a course of lectures.——On account of reaching the age limit, Profs. L. Mangiagalli, gynecology, Milan; A. Breda, dermatology, Padua; G. Sperino, anatomy, Modena, and G. Romiti, anatomy, Pisa, are automatically retired from their chairs this year. A university fellowship has been founded in honor of Professor Romiti by the city of Leghorn, where he resides.——Dr. C. M. Cortezo, Madrid, director of the *Siglo Médico* and life senator, has been appointed president of the Spanish council of state, the first time that a physician has held this position. He has been a member of the council since 1909, and Dr. A. Fernández Caro, surgeon general of the navy, has been appointed to the vacancy in the Consejo de Estado.

The International Prizes of the French Surgical Society.—Several of the nine endowed prizes of the French Société nationale de chirurgie are open to international competition. The Laborie annual prize of 1,200 francs is awarded for the

best unpublished work on any surgical topic sent in by any physician or medical student, French or foreign, in French, Latin, English or German. The same conditions apply to the Gerdy prize, 2,000 francs, biennial, the topic for 1925 being "Action of General Anesthetics on the Liver," and the Ricord prize, biennial, 300 francs, on any surgical subject. The Lannelongue gold medal, with 3,000 francs, is awarded every five years to the surgeon who, in the preceding ten years, has contributed most to the progress of the art and science of surgery, regardless of nationality, except that the medal cannot be awarded twice in succession to the same nation. At the recent annual meeting of the society, this medal was awarded to Dr. George Crile, Cleveland, U. S. A., for the "ensemble de ses travaux." The society has five United States members besides Dr. Crile, and thirteen corresponding members.

Deaths in Other Countries

Dr. **K. Rzothowski,** professor of internal medicine at the University of Warsaw.——Dr. **E. van Imschoot,** professor of surgery, Ghent.——Dr. **Pedro Lacavera,** professor of medical zoology at Buenos Aires, member of congress and vice president of the national public health service.——Dr. **Clotilde Mulon,** Paris, member of the council of the Assistance publique, wife of Professor Mulon of the Faculté de médecine.——Dr. **G. Naumann,** Stockholm, for many years surgeon in chief of the Göteborg public hospital, author of numerous works on surgical topics.——Dr. **A. Fernández Victorio,** Madrid, director of the Ciempozuelos Asylum.——Dr. **Ramón García Mon,** Havana, physician to the Spanish legation, was shot and killed by an assassin in his office, March 30.

CORRECTION

Proceedings of the Annual Congress on Medical Education.—In the abstract of the paper by Dr. Charles C. Guthrie (THE JOURNAL, March 21, page 899), in the eighteenth line from the end, the word "amputation" should have been "augmentation." The sentence should read "The growing tendency toward closer physical correlation between laboratory and clinical quarters and hospitals probably will lead to great augmentation in practical and applied medical research in schools."

Government Services

Aeroplane Ambulances

The U. S. Army aeroplane ambulances, up to the present, have been converted from different types of military aeroplanes. These have not been entirely satisfactory. A special aeroplane has now been constructed for an ambulance and is undergoing a service test. This ambulance has room for two patients, a surgeon and a pilot, and 65 inch head room for the surgeon so that he can treat patients as indicated. The practicability of the aeroplane ambulance has been proved recently by the French in their operations in northern Africa, where it has been put to extensive use and has been a factor of saving an appreciable number of lives.

U. S. Public Health Service

Asst. Surg. Gen. John W. Kerr has been directed to represent the service as a delegate at the annual meeting of the American Medical Association, Atlantic City, May 24-29.——Asst. Surg. J. Carroll Montgomery has been assigned to duty at Topeka, Kan., in connection with the development of whole-time county health service throughout the state.——Senior Surg. Claude C. Pierce has been directed to confer with state health officers of Kentucky and Tennessee concerning the control of smallpox.——Surg. Knox E. Miller has been directed to proceed from New Orleans to Shreveport from time to time in connection with an investigation relative to the use of narcotics.——The following physicians in the U. S. Public Health Service have been promoted and commissioned in the grade of surgeon: Thomas Parran, Jr., John W. Tappan, Roy P. Sandidge, Ralph C. Williams, Paul D. Mossman and Rickey L. Waugh.——Acting Assistant Surgeon Oswald E. Denney has been directed to proceed from Carville, La., to New Orleans, to attend the meeting of the Louisiana State Medical Society, April 21-23.

Foreign Letters

LONDON

(From Our Regular Correspondent)

March 28, 1925.

The Treatment of Acute Poliomyelitis

The lack of facilities in London for dealing adequately with the after-effects of acute poliomyelitis in children, and the permanent crippling, which is apt to be unnecessarily severe from lack of skilled and prolonged treatment, have led the ministry of health to issue a circular pointing out that the significance of early symptoms may easily be overlooked, even if a physician is consulted. As a rule, the disease is not diagnosed until paralysis of one or more limbs appears. It is therefore seldom notified until the child has been received into a hospital, and mild cases, uncomplicated by paralysis, are probably as a rule neither recognized nor notified. In view of the infective and disabling character of poliomyelitis, it is important that all cases should, as far as possible, be notified. It is further pointed out that, if paralysis occurs, permanent crippling can be avoided only by prompt and long-continued orthopedic treatment. In the early stages, this should be carried out in a specially equipped hospital; but after from three to six months, the patient may usefully be transferred to a residential orthopedic institution for further treatment, which may cover a period of from eighteen months to two years, or even longer. On returning home, supervision and after-care are necessary for a further period, in order to prevent a relapse.

Local authorities are therefore enjoined to consider what can be done to promote early diagnosis during the acute stage, and what arrangements can be made by cooperating with one another to send all children affected, whether the condition is slight or serious, to an institution equipped to give such special treatment as may be required to prevent avoidable muscular weakness or permanent deformity. In view of the obscure nature of the early symptoms of acute poliomyelitis, it is suggested that the local health authorities should remind physicians of the importance of early diagnosis, and a leaflet setting forth the symptoms of the disease has been drawn up by the ministry for circulation. The London County Council has for some years made available for physicians the services of experts for consultation in suspected cases of cerebrospinal fever, poliencephalitis, poliomyelitis and epidemic encephalitis. When necessary, a lumbar puncture is performed and an examination of the fluid made. Arrangements can usually be made without much difficulty for admission of patients with acute poliomyelitis to hospitals, but they cannot be retained there indefinitely owing to pressure on the bed accommodation. The London County Council is making arrangements under which the more permanent accommodation will be available.

Heavy Damages for Failure to Diagnose a Dislocation

Damages amounting to $9,000, with costs, were assessed against a physician for negligence in failing to diagnose a dislocation of the hip joint. About 9 p. m., Sept. 5, 1923, the plaintiff was found by the police on a road, unable to walk without help. He was charged with drunkenness and removed to a cell, where he was left lying on a plank bed. The defendant, a police surgeon, was sent for the following morning, as the plaintiff complained of pains in his leg. He examined the plaintiff and ordered his removal to the poor law infirmary, of which the defendant was medical officer. The plaintiff remained under the defendant's care until October 15, when he went home at his request. On the following

day his own physician examined him and suspected a fracture of the neck of the femur. A surgeon was called in, and he came to the conclusion that the plaintiff was suffering from an unreduced dislocation of the left hip joint. The plaintiff underwent an operation. The left leg was now 1 inch shorter than the other, and, according to medical evidence, would always be somewhat shorter and so weak that the plaintiff could never again do hard work. The plaintiff's case was that his hip was dislocated as the result of being run into by a car shortly before he was picked up by the police, and that his permanent disability was due to the defendant's failure in diagnosis. The defendant contended that there was no dislocation of the hip joint while the plaintiff was under his care. He admitted, however, that on November 3 there was such a dislocation, but he contended that it occurred after the patient left his care. The judge said that he was not satisfied that the plaintiff was drunk on the night of September 5, although he thought that the plaintiff's condition was partially due to drink he had taken. The defendant admitted certifying, September 6, that the plaintiff was suffering from severe bruising of the left thigh, the result of an accident, and a further certificate, October 12, stating that he was unable to follow his employment. The defendant was bound to bring to the plaintiff a fair, reasonable and competent degree of skill and care, and the judge came to the conclusion that the defendant was negligent. As to damages, the plaintiff was a strong, healthy man, aged 53, and his wages were $30 a week. If he had been properly treated from the first, he would have been laid up for six weeks, and would have been fit for light work in about three months, and eventually have recovered the full use of his limb. As it was, the plaintiff was left with one leg permanently shorter than the other and permanently weak, and was still unable to walk without the help of crutches, although it was hoped he would be able to dispense with these in five or six months' time.

Mechanical Restraint of the Insane

The care of the insane is a subject frequently discussed at present, in view of allegations of ill treatment, which have given rise to a royal commission to inquire into the subject. The board of control (the body appointed by the government to control the administration of psychopathic hospitals) has issued a new regulation dealing with mechanical means of bodily restraint. Under the existing law this must not be applied unless it is necessary for medical or surgical treatment, or to prevent the person from injuring himself or others. By the new regulation, the board determines that "mechanical means of bodily restraint" shall include all instruments and appliances whereby the free movements of the body or of any of the limbs of an insane person are restrained or impeded, but that only these instruments and appliances shall be used: 1. A jacket or dress, made of strong linen or some other strong material (*a*) laced or buttoned down the back, having long outside sleeves fastened to the dress only at the shoulders, with closed ends to which tapes may be attached for tying behind the back when the arms have been folded across the chest; or (*b*) of some other pattern approved under the seal of the board, a sample bearing the seal of the board in this case being kept at the institution or workhouse for inspection. 2. Gloves without fingers, so fastened at the wrists that they cannot be removed by the wearer, and made of linen, leather (chamois or other), or some strong material, padded or otherwise. (3) Sheets or towels, when tied or fastened to the sides or ends of a bed or to other objects. If, in the opinion of the medical officer or physician who gives the certificate required by the section, some other mechanical means of restraint are necessary in a particular case in which the circumstances are exceptional, such means may be used with the previous sanction of the board for such period as it may authorize. During the use of any of these forms of restraint, except the second, the patient must be visited frequently by a medical officer and be kept under continuous special supervision by an attendant. The following are not to be regarded as coming within the definition of "mechanical means of bodily restraint," but are to be used only under medical order, and their use must be entered on the clinical records: (*a*) The continuous bath. A cover shall not be used unless the aperture therein for the patient's head is large enough for his body to pass through. (*b*) The dry and wet pack. No straps or ligatures of any kind shall be used, and the patient shall be released for necessary purposes at intervals not exceeding two hours. (*c*) Splints, bandages and similar appliances, when used in accordance with recognized surgical practice for operations or the treatment of fractures or other local injuries, and not so as to interfere with the free movement of the body or limbs more than is necessarily incident to their use for such purpose. (*d*) Gloves, if so fastened as to be removable by the wearer. (*e*) Sheets or towels used only for the purpose of artificial feeding, and merely held, not being tied or fastened. (*f*) Trays or rails fastened to the front of chairs used by idiot children, cripples or aged infirm adults to prevent their falling out and thereby injuring themselves, provided in the case of adults that it is within the patient's power to undo the fastening. In framing this regulation, which defines the mechanical means which may alone be used, the board desires to guard itself against the supposition that it has thereby given any greater countenance to this form of treatment than before. While recognizing cases in which it may be necessary and consistent with humanity, it remains of opinion that mechanical restraint should always be restricted as much as possible, that it should not be long continued without intermission, and that it should be dispensed with as soon as it has effected its purpose.

Preservatives in Food

Much more latitude exists with regard to the use of preservatives in food in England than in other countries; indeed, their use is almost unrestricted. But attention has recently been drawn to the injurious effects of many preservatives, and an important report has been made by a "departmental committee" appointed by the government to inquire into the subject. The result is that draft regulations have been prepared by the ministry of health. These propose to prohibit the use of any preservatives in food except sulphur dioxid and benzoic acid. A specified proportion of sulphur dioxid would be permitted in sausages, jam, fruit, beer, cider, wines and fruit juices. The use of benzoic acid would be permitted in coffee extract, nonalcoholic wines, fruit juices and mineral waters. No article of food, however, would be allowed to contain both preservatives. Metallic coloring matters, particularly copper, would be prohibited, and also some coal-tar colors. When sausages, jam or coffee extract contain preservatives, the fact is to be stated on the label. The regulations will apply to imported articles as well as to those produced in this country, but not to articles intended for export or reexport. These proposals have given rise to considerable controversy, particularly as to the prohibition of boric acid. The chemist Sir William Pope and other experts have attacked the prohibition of this substance, which is now widely used. They point out that a sufficient supply of food is as important as purity, and consider that the proposed regulations threaten the former. Sir William Pope holds that there is no evidence that boric acid in moderate amounts is harmful to healthy adults. But there is evidence that in quantities, which it is quite possible to take in foods now being sold, it may be injurious to children and invalids.

PARIS

(From Our Regular Correspondent)

March 19, 1925.

Acute Intoxication from Barbital and Other Derivatives of Malonyl Urea (Barbiturism)

Several cases of acute poisoning resulting from barbital were reported recently at a meeting of the Société médicale des hôpitaux de Paris. In these instances the intoxication was voluntary. It seems that the taking of barbital to commit suicide is becoming more and more frequent. Since the sale of barbital and the derivatives of malonyl urea is not yet under government control, it would seem that legislation is needed in this regard. Rivet, Jany and Herbain gave the history of a pregnant woman, aged 30, who, with suicidal purpose, had taken a 10 gm. dose of barbital. This woman, venesection having already been applied, was not admitted to the hospital for thirty hours, too late for gastric lavage to be of value. She died at the end of seventy hours in a profound coma, during which a miscarriage occurred. Huber reported a similar observation on a woman, aged 35, who, during an attack of melancholy, ingested a good-sized but unknown dose of barbital. She lapsed into a profound coma, and presented, after a short premonitory phase of hypothermia, a hyperthermia which persisted between 40.5 and 41 C., until death ensued at the end of ninety-eight hours.

Caussade and Tardieu describe the symptoms of acute intoxication from barbital in five cases that occurred in the Hôtel Dieu. Acute intoxication from barbital never results, it may safely be said, from the ingestion of therapeutic doses of the drug. All derivatives of malonyl urea are powerful drugs which, in toxic doses, produce serious disorders of the cerebrospinal and the neurovegetative nervous system, and through their action on the functions of the liver and kidneys. The toxic dose of these drugs is difficult to determine exactly; for barbital it lies between 1 and 10 gm. The lethal dose varies between 2 and 14 gm., but it is ordinarily under 5 gm. Acute intoxication is evidenced always by lethargy or coma following a prodromal ebrious stage which lasts about half an hour. Varying with the case, the coma may be light or profound, or it may be a so-called "wakeful" coma, expressing itself by paroxysms of agitation and delirium alternating with short periods of normal sleep. During the coma, ocular symptoms, such as nystagmus and diplopia, may be observed. The condition of the pupils varies, and has therefore very little diagnostic value. Miosis is encountered not only in the "coma carus" but also in the moderate lethargies. Mydriasis is said to occur especially in comas of a favorable evolution. Alternate contraction and dilatation of the pupils have also been observed. Oliguria is frequent; even anuria may occur; polyuria is rare. Cases of albuminuria with cylindruria, of glycosuria and of urobilinuria have been observed. The urea content of the blood has sometimes been found to be increased. A low fever is frequent. Sometimes the hyperthermia is marked and increases with the coma. At times, salivation or profuse sweats may be observed. The nervous symptoms vary; tonic or clonic, and tetaniform or epileptiform convulsions have been reported. The abdominal and corneal reflexes may be abolished. The mental disorders are characterized by periods of delirium or of confusion, ataxo-adynamic agitation, or of hallucinatory and fear-inspiring oneirism. Spasmodic dysarthria resembling that of general paralysis may be present. Quite frequently one encounters skin symptoms: bullous, pustulous, morbilliform, scarlatiniform or urticarial erythemas. They may lead to diagnostic errors. They are ordinarily fugacious, and are usually associated with a vagosympathetic disequilibrium. The diagnosis of the intoxication is generally difficult. The other toxic comas must be ruled out. Fabre's microchemical test, by means of which barbital and the other derivatives of malonyl urea may be detected in the urine, blood and cerebrospinal fluid, will be of aid. When lethargy, ophthalmoplegia and fever are found associated, it will be readily understood that the condition may sometimes be confused with epidemic encephalitis. Drug addicts may ingest a toxic dose of barbital, although one may not properly speak of addiction to barbital.

While acute intoxication is almost always the result of attempts at suicide, and not the results of therapeutic administration, fatalities have been reported recently following intravenous injections of Somnifène.

Changes in the liver certainly favor intoxication, and a history of liver disorders constitutes a contraindication to the therapeutic use of derivatives of malonyl urea. In case of poisoning, an abundant venesection often has a curative effect.

From the medicolegal and social point of view, urgent measures are needed regulating the sale of these products. The Academy of Medicine has presented several proposals to this end, and it is to be hoped that all hypnotics may soon be classed among the list of poisonous substances covered by the decree of Sept. 19-20, 1916.

Resolutions of the Academy of Medicine in Support of the Crusade Against Infant Mortality

After hearing the report presented by the Commission permanente de l'hygiène de l'enfance, the Academy of Medicine adopted a number of resolutions which constitute its plan of campaign in support of the general crusade against infant mortality.

In the case of 20 per cent. of the infants for whom a wetnurse is engaged, the child is turned over to the nurse during the first nine days; in 75 per cent. of the cases, the child receives its own mother's milk less than three months. The academy urges, therefore, all persons who assist or advise pregnant women and young mothers to make it plain to them that they are subjecting their children to great risks by not nursing them long enough.

The medical supervision of government wards remains defective because of inadequate appropriations. Supervision is especially needed for bottle-fed infants. The minister of public health is urged to create central homes, where medical supervision would be much more simple than in isolated homes.

In a good many departments it is almost impossible to find wetnurses, or the service is very defective, owing to the low compensation that they receive. The academy requests that the departmental assemblies take measures to raise the compensation paid to wetnurses, and to increase the size of the benefits paid to mothers who nurse their own children, since the present high cost of living renders such an increase indispensable.

The Crusade Against Charlatanism

Justin Godard, minister of public health, has addressed a letter to the managers of leading newspapers in which he expresses the desire that the publication of medical advertisements in the daily press be checked. Numerous complaints have reached him of the exploitation of patients by enterprises that attract the public through an abusive form of publicity, through advertisements in periodicals, by posters, circulars, leaflets, and so forth. He makes a direct appeal to the press to aid him in checking this medical or pseudomedical mercantilism, the victims of which are becoming more numerous every day. As a first step in an effort to regulate medical advertising in the general press, he demands of the newspapers that they insert in their columns only advertisements that satisfy these two conditions: 1. Their text must be edited with discretion. The word "cure" should not be used at all. No honest physician and no conscientious scientist, Godard emphasizes, will affirm that he can cure a given disease, and in a public announcement in the press the word "cure" constitutes an audacious affirmation if not an actual lie. It is in fact equivalent to a deceptive promise,

which characterizes an attempt to defraud. 2. No medical advertisement should be accepted that is signed by some fanciful title, such as "academy," "institute," or by an anonymous title. Any one offering his medical services should do so under his own name, thus assuming responsibility for his statements and acts.

Godard is convinced that if these two conditions are complied with it will mark considerable progress, and feels assured that the public will be grateful to the press for having consented to take the first step in this movement to protect the health and morals of the community.

NETHERLANDS

(From Our Regular Correspondent)

March 9, 1925.

Proposed Law to Establish a Medical Disciplinary Council

As a result of various difficulties that have arisen in connection with suits at law involving physicians, and as a consequence of the campaign waged by the *Nederlandsch Tijdschrift voor Geneeskunde*, a bill has been presented in the lower house providing for the creation of disciplinary councils for physicians, comparable in every respect to those governing the bar. The organization planned is copied after an official body which already existed within the Netherlands Medical Association, which had a kind of regional councils for the settlement of difficulties arising between physicians.

The proposed law provides for the creation of disciplinary councils consisting of four physicians and an attorney. A central council similarly constituted would have appellate jurisdiction and would be the highest instance on appeal. For the adjustment of differences between dentists or between midwives, two of the physicians of the council could be replaced by two dentists or by two midwives, as the case might demand. The membership of these councils would be subject to royal appointment. Article 1 of the present draft fixes the conditions under which a practitioner may be summoned before a council; namely, whenever a physician is guilty of an abuse of confidence, gross negligence or a professional misdemeanor. The penalties imposable by the council are: (1) a warning; (2) a reprimand; (3) a fine for an amount not exceeding 3,000 florins ($1,200); (4) suspension for one year from the privilege of practicing medicine, and (5) cancelation of license to practice.

The Number of Medical Practitioners

Recent statistics show that the number of physicians practicing medicine in the Netherlands, as of Dec. 31, 1923, was more than 3,800, or an increase of 150 over the preceding year. During 1923, legal proceedings were instituted against forty-five persons alleged to have practiced medicine without a medical diploma; thirty-nine of these were found guilty.

Infant Mortality

The Nederlandsche Bond tot Bescherming der Zuigelingen, with the outbreak of the war, began and has since kept up a publicity campaign to lower the infant mortality rate. Since 1915, it has issued a series of pamphlets illustrating the work of the movement. The last brochure shows the results secured thus far. The infant mortality rate for the period 1904-1908 was 12.5 per cent., but for the period 1919-1923 it had been reduced to 5.70 per cent.

Health and Accident Insurance

The proposed law pertaining to health and accident insurance requires all persons whose income from wages or salary is less than 8 florins ($3.20) a day to be insured against injury from disease or accident. The insurance will have a collective character and will be organized through the mediation of industrial societies. Medical and pharmaceutic care are not regulated by these provisions, but will be the subject of other special and independent legislation.

Celebration at the University of Leyden

Our oldest university, the University of Leyden, founded in 1575, has just celebrated its three hundred and fiftieth anniversary. On this occasion, all the notable scholars of the country gathered at Leyden to take part in the impressive ceremonies. Many previous celebrations have taken on an international character, but it was decided to make this celebration a distinctly national one. Th eroyal family was present at the ceremonies, during the course of which Queen Wilhelmina became the recipient of the title of doctor honoris causa.

Government Supervision of Pharmaceutic Specialties

A bill has been presented in the lower house, which provides for government supervision of pharmaceutic products put on the market under the form of specialties. The abuse of advertising privileges and the worthlessness of many of the products on the market have made such supervision necessary. The bill provides that no products may be put on the market until they have been analyzed and approved by the state pharmacotherapeutic institute. This government action seems to be the result of a discussion that arose on this subject at a recent session of the Congress of Public Hygiene, as mentioned in my letter of January 7.

The International Congress on Industrial Accidents and Industrial Diseases

As previously mentioned, the congress on industrial accidents and industrial diseases will meet in Amsterdam, Sept. 7-12, 1925. The congress will be divided into two sections, which will meet separately. One section will deal with industrial accidents and the other with industrial diseases. The first section will discuss: (1) the treatment of wounds —primary or secondary suture; (2) traumatic articular lesions; (3) the regulation of short periods of disability; (4) the industrial education of the medical specialist who deals with industrial accidents; (5) abdominal wounds, and (6) osteosynthesis. The topics of the second section are: (1) pneumonoconiosis; (2) hygienic conditions of labor in warm and moist atmospheres; (3) psychotechnic in relation to vocational guidance; (4) industrial gas intoxication; (5) eye diseases of industrial origin, and (6) nervous diseases of industrial origin. In addition, there will be a number of addresses by foreign delegates. Dutch, English, French, German or Italian may be used on the floor of the congress.

BUENOS AIRES

(From Our Regular Correspondent)

Feb. 10, 1925.

Roentgen-Ray Diagnosis of Pregnancy

Recently, much attention has been aroused by the beautiful roentgenograms exhibited by the roentgenologist Dr. C. Heuser, which permit diagnosing pregnancy even from the first month. His method consists in injecting iodated petrolatum in the uterus before taking the picture. In case of pregnancy, the uterus will appear occupied to some extent. Dr. Heuser has left for London, to submit his method and report his results at the roentgenologic congress to be held there.

Medical Institutes

A number of our higher institutions of learning and prominent medical personalities are advising the organization of special institutes for each serious disease, such as cancer, tuberculosis, syphilis, leprosy, goiter and hydatid infection. The younger scientists, on the contrary, believe that the real basic

problem consists in the proper organization of the fundamental sciences: normal and applied anatomy, histology and embryology, physiology, physical and biologic chemistry, pathology, microbiology and parasitology. After a sufficient number of researchers have been developed in these sciences, it would be easy to undertake investigations of each separate problem. The plan of organizing a separate institution for each disease seems illogical and unnecessarily expensive, and would require an enormous number of specialists.

Piedra

So far, the curious hair disease piedra has not been seen in Argentina, but Dr. Oral Arias reported recently a case in a student in the Corrientes province. A fungus was grown from the nodules.

Endemic Arsenicism

In the province of Córdoba there has been found an area in which both the ground and the water contain sufficient arsenic to cause occasional symptoms of chronic intoxication, both in man and in animals. Zinny and Vivaldo have noted cases in the same region, in Belle-Ville. A short time ago, it was found that this area is much more extensive than believed originally, as Dr. Girla Corbella showed that it goes as far as the northwestern part of the province of Buenos Aires.

Bismuth in Leprosy

Grecco and Muchietti have reported that the basic bismuth salicylate has given results in a number of leprosy cases comparable to those obtained with the classic chaulmoogra oil.

BERLIN

(From Our Regular Correspondent)

March 14, 1925.

Cosmic Influences in Relation to Psychic Manifestations

In recent years we find ideas advanced which emphasize more strongly than ever the inner relationship between animate and inanimate nature and which endeavor to bring man into closer relation with the whole cosmos that surrounds him. The influence exerted on the psyche by changes in the weather and in the seasons, recognizable in rhythmic manifestations of mortality, suicide, psychic depressions and exaltations and the like, has been made probable, if not actually proved, by the statistical researches of serious-minded investigators. Professor Hellpach, psychologist at the politechnicum in Karlsruhe and at present the *Staatspräsident* of the Baden free state, recently delivered a very interesting lecture on these cosmic influences.

The most convincing evidence for the action of cosmic influences on physical and psychic life is found in the vernal crisis, which affects all mankind of both hemispheres living between 35 and 60 degrees north and south latitude. Fecundations, sexual violations, suicide and admissions to psychopathic hospitals become consistently more frequent every year between April and June in the northern and between October and December in the southern hemisphere. By experimental investigations it has been shown that, at the same time, also the physical and mental capacity and performance of school children and adults undergo a remarkable change; the motor capacity rises and the mental capacity falls, while in midsummer they both drop to the minimum, and do not reach their maximum again until between autumn and early spring. The vernal crisis may be regarded therefore as a sort of elation or intoxication, which, to be sure, most of the victims are not conscious of exhibiting. The instinctive activities increase and the reasoning faculties become less acute and active, with the result that inhibitions are less manifest. These facts explain the effects of midspring along the lines mentioned above, for the otherwise so diverse manifestations, such as sexual desire and suicide, are associated here only owing to the fact that they presuppose a condition of increased motor activity, together with a more limited survey of the probable effects of one's actions. That an explanation for the phenomena is to be sought in a modification of the internal secretions is a seductive hypothesis and one that harmonizes with the present trend of medical thought, but it has no adequate foundation. The fact is, the basic elements of these cosmic influences are still unknown. It was at first thought that the increase in temperature, and later that possibly the increase in light, occurring in the spring months, might account for the manifestations; for instance, the suicide curve corresponds to the length of the days, or the hours of sunlight. It is possible that there is a combined influence, the increased heat exerting a paralyzing effect on the mind and the increased light stimulating the motor system. But we must not forget to consider also the modifications of the electric currents of the air, since in spring the tendency to thunder storms develops very rapidly; then, again, the changes in the structure of the light rays during the spring season are not without their influence.

The lecturer explained the latter influence more in detail by citing the researches that Trabert carried out in Innsbruck on adults, school children and epileptic patients with regard to the effects of the *Föhn*, or violent south wind. In this connection, the remarkable fact that the low level in the condition of the experimental subjects usually coincided with the approach of a barometric depression instead of with a depression already prevailing pointed to an unknown atmospheric factor that made itself felt from a distance. The similar effect exerted by the *Föhn* wind, the sultriness that precedes a thunder shower, tropical atmosphere, raw and sultry atmosphere, and the atmosphere that precedes a squall, although these weather conditions vary greatly as to warmth and moisture, points to electric currents in the air as the factor that has the chief physiologic influence.

Also Arrhenius had his attention called to the electric currents of the air as mediators of biologic influence by his study of the exceedingly rare and unique phenomenon of the palolo worm, a remarkable marine worm found in vast numbers in the Polynesian seas, which, in October and November, the middle of the spring season in that region, rises to the surface of the water to spawn, but only at night and at the last quarter of the moon. All attempts to explain the strange phenomenon, the actual occurrence of which has now been established beyond all doubt, have failed to satisfy. In the famous discussion of the problem, held at the International Zoological Congress in Geneva, the swaying action of the tide as produced chiefly by the moon was set up as the most likely cause. Hellpach, however, regards the theory proposed by Arrhenius as more satisfactory, according to which the electric currents of the air as affected by the moon constitute the connecting link between the moon's phase and the peculiar spawning season of *Palolo viridis*. Dorno's researches on the seasonal changes in light structure (the mixture of heat-producing, chemically active and ultraviolet rays) open up entirely new fields of explanation, and Kestner's recent investigations, according to which gases produced by the passage of the light rays through the air (especially, nitrous oxid) are the medium through which the most important physiologic effects of radiation are brought about, lead to still further theorizing. It cannot be said, however, that the interpretation of the psychophysical effects of the spring season has been much advanced by these recent scientific researches.

Hellpach discussed also the phenomena of waking and sleeping hours, which are so evidently and intimately associated with the cosmic succession of day and night. Sound-

ness of sleep and physicomental capacity for performance the day following run, when recorded graphically, in much the same curve; at least, the main portions of the curves correspond quite closely. The causal factor, however, is quite obscure, and the only point of contact to explain the effects of sleep lies in the so-called turning points of air pressure and the electric air currents, which under normal (that is, rural) conditions correspond approximately to the hours for retiring and rising; and for the three-hour decline in performance around noon (from 12 to 3 p. m.) the only explanation lies in Dorno's researches on the changes in light structure that occur from hour to hour, during the day. Aside from the periods already mentioned, periods of twenty-eight days and of seven years have been recognized. However, Swoboda's statements in regard to these periods have not as yet been substantiated, and remain thus far a mere theory. Nevertheless, Möbius has pointed out very plainly the operation of a seven-year period in Goethe's life, which is no less peculiar than the facts regarding the palolo worm. Since a cosmic seven year period has not been definitely established, the question as to the cause is still left open.

While it is true that the sum of our knowledge of the causal relations of observed facts regarding cosmic influences on our physical and psychic life is not very satisfying as yet, we must not on that account despair of being eventually able to unravel the mystery of the relations of man to the world about him.

The Spread of Epidemic Encephalitis

In order to obtain a survey of the incidence and the effects of epidemic (lethargic) encephalitis, the Prussian health service sent out a questionnaire to all the physicians of Prussia, enclosing also a leaflet giving information in regard to the manifestations of the disease. At the same time, the government appropriated a considerable sum for research work with a view to discovering the causative agent of the disease and, if possible, developing a specific method of treatment.

Whereas, at first the lethargic form of the disease prevailed here, there gradually appeared a hyperkinetic type, which is attended by trembling, shaking and choreic movements, and, particularly, by transient paralysis of the eye muscles. The lethargic type results fatally in about 20 per cent. and the hyperkinetic type in about 30 per cent. of the cases. But those who escape death at the first onset are not entirely out of danger, for a considerable portion of them develop a chronic disease condition that unfits them for work for long periods —months or years, or even for life. In other cases, there results a slowly developing but steadily progressing invalidism. Geheimrat Schultze and Professor Stern (both of Göttingen) estimate that in the province of Hanover alone, from 1918 to the middle of 1924, there were a thousand cases of epidemic encephalitis, and that approximately 400 patients passed into the chronic stage.

Marriages

WILBERT GRIEVE FRASER, Ottawa, Ont., Canada, to Miss Alexandra Williamson Stirling of Atlanta, Ga., March 26.

WALLACE HUSTON DUNCAN, Washington, Ind., to Miss Alice Carson of Paris, Texas, at Henderson, Ky., March 18.

SILBER C. PEACOCK, Chicago, to Miss Ruth Sarah Pearce of Bowen, Ill., at Galesburg, March 28.

ADDISON BYBEE, Milford, Utah, to Miss Elizabeth B. Skeele of Monrovia, Calif., Dec. 23, 1924.

WALTER E. MOBLEY to Miss Frances Johnson, both of Macon, Ga., February 15.

Deaths

Samuel Jayne Fort, La Plata, Md.; University of Pennsylvania School of Medicine, Philadelphia, 1882; member of the Medical Chirurgical Faculty of Maryland; past president of the Howard County Medical Society; formerly demonstrator, lecturer and professor of materia medica and pharmacology, College of Physicians and Surgeons, Baltimore; at one time superintendent of the Font Hill Private Home School for Backward and Mentally Deficient Children, Ellicott City; served during the World War; deputy state health officer of Charles, Calvert and St. Mary's counties for several years; aged 65; died, March 26, of pneumonia.

Deering J. Roberts, Nashville, Tenn.; University of Nashville Medical Department, 1860; member and past president, Tennessee State Medical Association; formerly professor of principles and practice of medicine, University of Tennessee College of Medicine, Memphis, and the University of the South Medical Department, Sewanee; at one time member and secretary of the city board of health; Confederate veteran; aged 84, died, March 29.

Aaron B. Miller ● Syracuse, N. Y.; University of Maryland School of Medicine, Baltimore, 1882; professor of gynecology, Syracuse University College of Medicine; president of the New York State Board of Medical Examiners; member of the American Association of Obstetricians and Gynecologists; on the staff of St. Joseph's Hospital; aged 65; died suddenly, March 28, of heart disease.

Fred Brown Bogardus ● Kalispell, Mont.; Chicago Homeopathic Medical College, 1901; College of Physicians and Surgeons, Chicago, 1906; president of the Flathead County Medical Society; specialized in ophthalmology, otology, laryngology and rhinology; aged 47; died, in March, at Spokane, Wash., of erysipelas.

David O'Brine, Urbana, Ohio; Columbus Medical College, 1885; for six years professor of chemistry and geology, State Agricultural College of Colorado, Fort Collins; formerly health officer; author of "Laboratory Guide of Chemical Analysis"; aged 75; died, February 21, following a long illness.

William Polk Richardson, Beaumont, Tex.; Medical Department of Tulane University of Louisiana, New Orleans, 1906; member of the State Medical Association of Texas; aged 48; died, February 17, at the Scott and White Hospital, formerly the Temple (Texas) Sanitarium, of pneumonia.

Harry Albert Shimp ● Minto, N. D.; Indiana Medical College, School of Medicine of Purdue University, Indianapolis, 1906; member of the Indiana State Medical Association; served in the M. C., U. S. Army, with the rank of captain, during the World War; aged 41; died, in March.

John William Lee ● Minneapolis; Minneapolis College of Physicians and Surgeons, 1908; member of the American Academy of Ophthalmology and Oto-Laryngology and the Minnesota Academy of Ophthalmology and Oto-Laryngology; aged 49; died, March 11, of pulmonary embolism.

William Evelyn Porter ● New York; Medical Department of Columbia College, New York, 1888; medical director of the Mutual Life Insurance Company; formerly consulting gynecologist to the Manhattan State and St. Vincent's hospitals; aged 59; died, March 26, of pneumonia.

Benson Mitchell Feldman ● Altoona, Pa.; Medical Department of Columbia College, New York, 1877; member of the Medical Society of the State of New York; aged 69; died, suddenly, March 2, while enroute from New York to Atlantic City, of cerebral hemorrhage.

Luther Park Stephens ● Atlanta, Ga.; Atlanta Medical College, 1887; past president of the Fulton County Medical Society; formerly member of the board of education; at one time on the staff of the Grady Hospital; aged 62; died, March 18, at Brunswick.

Thomas Cole Holloway, Lexington, Ky.; George Washington University Medical School, Washington, D. C., 1903; member of the Kentucky State Medical Association; aged 51; died, March 16, of a self-inflicted bullet wound while suffering from ill health.

Angus James Smith, St. Petersburg, Fla.; University of Louisville (Ky.) School of Medicine, 1915; member of the Florida Medical Association; served with the British Army, in France, during the World War; aged 46; died, February 22, of pneumonia.

Peter McGill, Boundbrook, N. J.; University of Pennsylvania School of Medicine, Philadelphia, 1879; member of the Medical Society of New Jersey; aged 70; died, March 6, at the New York Post-Graduate Medical School and Hospital, of heart disease.

Fernando Cortes Rose, Allen, Okla.; College of Physicians and Surgeons, Little Rock, Ark., 1909; member of the Oklahoma State Medical Association; aged 50; died, March 3, at the Ada (Okla.) Hospital, of injuries received in an automobile accident.

George B. Tullidge, Philadelphia; Jefferson Medical College of Philadelphia, 1896; formerly on the staffs of the Jefferson, Wills Eye, Methodist, Jewish and St. Agnes hospitals; aged 65; died, March 8, of cerebral embolism and endocarditis.

Elmer E. Hancock, Moorestown, N. J.; Hahnemann Medical College and Hospital of Philadelphia, 1885; aged 62; died, March 10, at the Hahnemann Hospital, Philadelphia, of chronic myocarditis following an operation on the gallbladder.

Arsene Henri Cote, Port Huron, Mich.; Detroit College of Medicine and Surgery, 1894; member of the Michigan State Medical Society; formerly city health officer; aged 54; died, March 5, at the Miami (Fla.) City Hospital, of heart disease.

Frank Barker Snodgrass, Mount Vernon, Ohio; University of Pennsylvania School of Medicine, Philadelphia, 1902; served in the M. C., U. S. Army, during the World War; aged 53; died, March 10, at Kenton, of asthma and heart disease.

Oliver James Westlake, Silver City, N. M.; Medico-Chirurgical College of Kansas City, Mo., 1900; member of the New Mexico Medical Society; formerly county and city health officer; aged 51; died, March 11, of tumor of the brain.

Albert Clement Maynard, Providence, R. I.; University of Montreal Medical Faculty, Montreal, Que., Canada, 1901; member of the Maine Medical Association; aged 47; died, March 7, at the Notre Dame Hospital, of septicemia.

Frank R. Burroughs, Ritzville, Wash.; University of Buffalo Department of Medicine, 1883; formerly councilman, mayor and postmaster; for many years county health officer; aged 65; died, January 28, of cerebral hemorrhage.

Thomas Hale Streets ● Medical Director, U. S. Navy, retired, Wyncote, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1876; Spanish-American War veteran; aged 77; died, March 3, of heart disease.

Francis Joseph Adolph Bennett, Auburn, N. Y.; University of Michigan Medical School, Ann Arbor, 1911; member of the Medical Society of the State of New York; aged 36; died, February 9, of intestinal obstruction.

John Henry Rock ● Detroit; University of Louisville (Ky.) School of Medicine, 1916; served in the M. C., U. S. Army, during the World War; aged 40; died, March 3, of an overdose of medicine taken accidentally.

Riley H. Davidson, Lexington, Tenn. (licensed, Tennessee, 1889); member of the Tennessee State Medical Association; for many years county health officer; aged 73; died, in March, of cerebral hemorrhage.

Agnes M. Johnson Richmond, McConnelsville, Ohio; Woman's Medical College of Pennsylvania, Philadelphia, 1868; aged 88; died, March 6, as the result of an injury received in a fall.

Robert W. Amos, Joplin, Mo.; University of Tennessee College of Medicine, 1887; member of the Missouri State Medical Association; aged 64; died, March 2, of carcinoma of the pancreas.

Edward R. Mansfield, Millinocket, Maine; Cornell University Medical College, New York, 1907; member of the Maine Medical Association; aged 47; died suddenly, March 4, of heart disease.

Frederick William Redeker, Polsom, Mont.; Jefferson Medical College of Philadelphia, 1878; also a druggist; aged 71; died, January 1, at Rochester, Minn., of pneumonia, following an operation.

Thomas S. Williams, Stilwell, Okla.; Baylor University College of Medicine, Dallas, Tex.; 1905; member of the Oklahoma State Medical Association; aged 61; died, February 19.

Albertus Bentley Nichols, Oakland, Calif.; College of Physicians and Surgeons, Baltimore, 1904; formerly a practitioner in Arizona and West Virginia; aged 45; died in February.

Lew G. Wallace, Bellevue, Ky.; University of Louisville School of Medicine, 1904; served in the M. C., U. S. Army, during the World War; aged 57; died, March 3, of pneumonia.

Julian A. Norfleet, Norfolk, Va.; Medical College of Virginia, Richmond, 1886; member of the Medical Society of Virginia; aged 60; died, February 9, following a long illness.

Robert H. Conaway, Stone Hill, Mo. (licensed, Missouri, 1892); member of the Missouri State Medical Association; aged 72; died, February 7, at Dillard, of abscess of the liver.

Louis Bernheim, San Francisco; University of Vienna, Austria, 1894; served in the M. C., U. S. Army, during the World War; aged 59; died, February 20, at Los Angeles.

William Edwin Winskel, Chicago; Trinity Medical College, Toronto, Ont., Canada, 1877; aged 71; died, in February, at the South Chicago Hospital, of cerebral hemorrhage.

Cary T. Wiant, Marion, Ohio; Pulte Medical College, Cincinnati, 1882; member of the Ohio State Medical Association; aged 66; died, March 18, of heart disease.

William Tecumseh Carson ● Hastings, Neb.; State University of Iowa College of Medicine, Iowa City, 1889; aged 57; died, February 2, of chronic myocarditis.

Charles Henry Stearns ● Captain, U. S. Army, retired, Palo Alto, Calif.; Beaumont Hospital Medical College, St. Louis, 1892; aged 55; died, February 10.

John Herring Davies, New York; Medical and Surgical College of the State of New Jersey, 1889; also a druggist; aged 83; died suddenly, March 8.

George Emory Plaster, Berryville, Va.; University of Maryland School of Medicine, Baltimore, 1848; Civil War veteran; aged 98; died, March 5.

Oscar DeVaul, Pilot Rock, Ore.; University of Oregon Medical School, Portland, 1904; aged 64; died, January 17, at Portland, of tuberculosis.

William Edgar Vanaude, Potterville, Mich.; University of Michigan Homeopathic Medical School, Ann Arbor, 1882; aged 79; died, in February.

G. Wilbert Watts, Chicago; Northwestern University Medical School, Chicago, 1894; aged 55; died, March 26, of bronchopneumonia.

Edwin Gould Woodruff ● New Rochelle, N. Y.; Dartmouth Medical School, Hanover, N. H., 1891; aged 59; died recently, of pneumonia.

George Sigel Eddy ● Los Angeles; College of Physicians and Surgeons, Chicago, 1896; aged 62; died, in March, of heart disease.

Vinson Meader Tirrell ● South Weymouth, Mass.; College of Physicians and Surgeons, Boston, 1893; aged 65; died, January 18.

Arthur Robichon, Montreal, Que., Canada; Montreal School of Medicine and Surgery, 1906; aged 43; died recently, of pneumonia.

Josephus Whitley Cavitt, Bryan, Texas; Jefferson Medical College of Philadelphia, 1878; aged 71; died, February 4, of pneumonia.

Charles Chittenden Farnham, Randolph, Mass.; College of Physicians and Surgeons, Boston, 1882; aged 86; died, in March.

John Martin Clark, Hamilton, Ohio; Hahnemann Medical College and Hospital, Chicago, 1894; aged 55; died, March 4.

James Coburn Burbank, Sioux City, Iowa; Hahnemann Medical College, Philadelphia, 1856; aged 90; died in March.

David Short Goodloe, Lexington, Ky.; University of Louisville School of Medicine, 1866; aged 80; died, February 1.

Edwy C. Ogden, Joliet, Ill.; Hahnemann Medical College and Hospital, Chicago, 1879; aged 65; died, February 28.

Harry Gilbert Martin, Chicago; Harvey Medical College, Chicago, 1902; aged 49; died, March 29, of heart disease.

George E. Orebaugh, Norwood, Ohio; Cincinnati College of Medicine and Surgery, 1898; aged 53; died in March.

Charles Evan Bacon, Los Angeles; Kansas City (Mo.) Medical College, 1890; aged 60; died, February 4.

Homer Markwell Clark, El Paso, Ill.; Chicago Medical School, 1922; aged 39; died, March 10.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

RINEX

A Mixture of Aspirin, Phenacetin and Quinin Sold as a Cure for "Colds," Hay-Fever and Asthma

During the past year an increasing number of inquiries has come to THE JOURNAL asking for information regarding "Dr. Platt's Rinex Prescription" advertised and recommended for "Asthma, Catarrh, Hay Fever, Rose Fever, Bronchitis, and Other Throat Affections" and also for "Head Colds or Coryza." The product has been widely advertised in the newspapers, and samples have been freely distributed. The preparation is put out by the Clinical Laboratories Company of Cleveland, Ohio. No information is given regarding the composition of the preparation, but under the heading "What Rinex Is" this statement appears:

"Rinex is a Physician's prescription, developed and perfected in the successful treatment of more than 7,000 clinical cases of Asthma, Hay Fever, Catarrh, Head Colds and other respiratory diseases. It is most carefully prepared from drugs of assured U. S. P. standard by one of the largest and most highly regarded Pharmaceutical Manufacturers."

It would be interesting to know just which one of the "largest and most highly regarded Pharmaceutical Manufacturers" puts up this "patent medicine," especially as in another part of the Rinex advertising the exploiters of this preparation state that the pharmaceutical manufacturers that make Rinex for the Clinical Laboratories Company also "specialize in ethical preparations."

Some of the claims made for Rinex in newspaper and other advertising are:

"KILLS COLDS — QUICK! Guaranteed Relief in 5 Hours."

"ROSE FEVER CURBED IN 24 HOURS. Every trace—fearfully runny eyes and nose—sneezing, headache, fever—vanishes in 24 hours with Cleveland specialist's new internal prescription."

"ASTHMA SPECIALIST GUARANTEES RELIEF."

"HEAD COLDS CONQUERED IN 5 HOURS."

Every "patent medicine" has its own story of origin. Rinex is no exception. Here is the brief story of the alleged genesis of "Dr. Platt's Rinex Prescription":

"Dr. M. G. Platt, of the Clinical Laboratories, Cleveland, after 8 years' intensive study of hay fever, asthma, catarrh and kindred affections—has recently perfected a new and amazingly successful method of treatment, entirely different from any heretofore used. With characteristic professional caution, the doctor does not call the new treatment a cure. But with it he has been able to banish all symptoms in 24 hours—not in a few isolated instances, but actually in 95 per cent. of the thousands of cases which have come under his clinical observation."

According to our records, Dr. Matthew Gault Platt of Cleveland received a diploma from the Cleveland-Pulte Medical College in 1914—the year in which this institution went out of existence. The doctor's alleged "characteristic professional caution" has not prevented the exploiters of Rinex from claiming that this "patent medicine" will bring "instant and complete relief from every form of asthma" whether of renal, cardiac or the simple bronchial type. The Rinex nostrum comes in the form of capsules containing a brownish powder, and there are also some yellowish-white tablets, each package containing twice as many capsules as tablets. In order that the public and the medical profession might know just what was in this "Safe Scientific treatment for the Relief of All Forms of Asthma, Catarrh and Hay Fever" and just what drugs in it "instantly attack the toxic poisons" [*Sic!*], several packages of the nostrum were turned over to the A. M. A. Chemical Laboratory for examination. The laboratory report follows:

LABORATORY REPORT

"A number of original packages of Dr. Platt's Rinex Prescription (Clinical Laboratories Co., Cleveland) were submitted to the A. M. A. chemical laboratory for examination. Each package contained thirty capsules and fifteen yellowish-white tablets.

"*Capsules.*—These contained a brown, heterogeneous powder having an odor resembling camphor; the average weight of the contents of each capsule was 0.35 gm. (5.4 grains). On the bottle label (in very small type) the presence of 1 per cent. of acetphenetidin is declared. Tests indicated the presence of acetphenetidin, acetylsalicylic acid, quinin, camphor, extractives from emodin-bearing drugs, tragacanth, calcium, magnesium, carbonate, sulphate, acid-insoluble substance (talc) and traces of sodium, potassium and phosphate. Tests for the following substances were negative: antipyrin, acetanilid, amidopyrin, belladonna alkaloids, caffein, arsenic, aconitin, strychnin, bromid, iodid, hexamethylenamin, sucrose and lactose.

Two lots of capsules were examined; on one lot (Lot A) determinations of solubility fractions were made, the details of which, with other details of analysis, will be published in the Annual Reports of the A. M. A. Chemical Laboratory for 1925. On the other lot, the following quantitative estimations were made:[1]

"Loss in vacuum over sulphuric acid (moisture)	1.61 per cent.
"Ash	12.17 per cent.
"Acid-insoluble material (talc)	4.11 per cent.
"Quinin	3.02 per cent.
"Acetphenetidin	16.2 per cent.
"Acetylsalicylic acid	34.8 per cent.

"From the analytic results, it is concluded that each capsule contains as its essential ingredients approximately:

"Aspirin	2 grs.
"Phenacetine	1 gr.
"Quinin	½ gr.

"The balance consists of an extractive from an emodin bearing drug (such as debitterized cascara), a very small amount of camphor, inert material and excipients.

"*Tablets.*—These were yellowish-white with an odor like oil of peppermint; the average weight of each tablet was 0.3 gm. (4¾ grains). Tests for sulphates, chlorids, phosphates, emodin bearing drugs, alkaloids and heavy metals were negative. Sodium, carbonate, sucrose (cane sugar), a trace of vegetable tissue, an acid-insoluble substance, probably talc, and traces of calcium and magnesium were present. Quantitative analysis gave the following results: sodium bicarbonate 72.82 per cent., sucrose 24.58 per cent., acid-insoluble 1.55 per cent., undetermined 1.08 per cent.

"From the results of the analysis, the composition of Rinex tablets is essentially as follows:

"Baking soda	73 per cent.
"Sugar	24.5 per cent.
"Talc	1.5 per cent.
"Excipient	1 per cent.

"Each tablet contains about 3 4/10 grains of baking soda and 1 1/10 grains of sugar."

1. On Lot A, of which there was a large amount of material, determinations showed calcium (Ca^{++}) 1.2 per cent.; magnesium (Mg^{++}) 0.66 per cent.; sulphate (SO_4^{--}) 2.7 per cent. and phosphate 0.15 per cent. This is equivalent to approximately 3 per cent. calcium sulphate (gypsum) and 3 per cent. magnesium carbonate, U. S. P.

Summed up then, it seems that Dr. Platt's Rinex Prescription is essentially a mixture of 2 grains of aspirin, 1 grain of phenacetin and ⅛ grain of quinin, with a small amount of laxative vegetable extractives and camphor. The supplementary treatment is nothing more striking than tablets of baking soda. Yet the public might well get the idea that Rinex is a combination of substances about which the medical profession is ignorant and that "Dr. Platt" was renowned in his profession, although he is a man of whom the medical profession generally has never heard except possibly through the advertising of this "patent medicine." This is typical of nostrum exploitation. Well-known drugs used for years by the medical profession are put out under a fancy name, the public being kept in ignorance of the ingredients in order that the essential factors for successful "patent medicine" exploitation—secrecy and mystery—may be maintained.

Correspondence

"CONGENITAL ECTODERMAL DEFECT"

To the Editor:—In our article entitled "Congenital Ectodermal Defect" (*Arch. Dermat. & Syph.* **10**:673 [Dec.] 1924), an unintentional injustice was done Dr. Henry B. Richardson of the Russell Sage Institute of Pathology. Our patient was investigated by Dr. Richardson in connection with extensive original basal metabolism research with the calorimeter. Through an unfortunate misunderstanding, his tests on our patient were published in our paper without specific permission; and while we credited the institute with the work, we failed to state that the tests were part of the original investigation being conducted by Dr. Richardson.

In an editorial (The Journal, February 14, p. 518), which comments on our article, the reader gains the impression that we did the basal metabolism work which, of course, is erroneous.

The misunderstanding has interfered with the publication of Dr. Richardson's work, for which we are very sorry.

George M. MacKee, M.D.,
George C. Andrews, M.D.,
New York.

BOVERI'S WORK ON CANCER

To the Editor:—More than ten years ago, Boveri published suggestions as to the fundamental nature of cancer, based on his previous studies in mitosis and development of double-fertilized sea-urchin eggs. Boveri was the greatest cytologist of his generation and probably the leading zoologist of his time—a man so keen, so careful and so cautious that any least suggestion from him deserves most thorough consideration. The German government recognized the importance of his suggestions as to cancer by inviting him to come to Berlin as head of a research institute which they would establish on such scope and plan as he might desire. But he was unable to accept this invitation.

His work on this subject is not known to American men of medicine. I have mentioned it to two past presidents of the American Medical Association, to thirty professors in medical schools, to the head of an important American institution for cancer research, to several of our most prominent surgeons a considerable portion of whose operative work is on cancer, and to a large number of physicians, and not one in all this list knew anything of Boveri's work.

In the year 1908, probably the leading English cytologist, connected in responsible executive capacity with the British Cancer Research Fund, spent some weeks in Würzburg, studying Boveri's preparations of sea-urchin larvae from double-fertilized eggs. At the close of this study, he said to me that he had seen no degeneration picture in cells of Boveri's sea-urchin material which he could not parallel from human cancer tissue, and that he had never seen a degeneration picture in a human cancer cell which was not paralleled in Boveri's material.

Boveri's studies seem to me to make it probable that cancer tissue, benign and malignant, can properly be defined as tissue in the nuclei of whose cells the numerical relations of the chromosomes have become distorted. Boveri's studies on cancer seem to me by far the most important yet made on this subject. Yet they are unknown in America except to zoologists, to whom, of course, all Boveri's work is known.

Boveri has not experimented with the causes of cancer. His experimental and analytic work has dealt with the demonstration of its nature. Boveri's work should be the starting point for any studies of causes, inheritance or cure of cancer. Ten years of neglect does not speak well for American medicine.

Boveri's last discussion of the nature and causes of cancer (Zur Frage der Entstehung maligner Tumoren, Jena, Gustav Fisher, 1914) contains full references to his sea-urchin studies, on which the suggestions as to cancer are based.

Maynard M. Metcalf, Washington, D. C.
Chairman, Division of Biology and Agriculture,
National Research Council.

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE METHODS OF THE SCIENTIFIC APPARATUS COMPANY

To the Editor:—Can you inform me as to the standing of the Scientific Apparatus Company, Long Island City, N. Y.? It strikes me that their methods are questionable, to say the least, and that physicians should be so informed. The concern sends by express, collect, one dozen ampules of their product "Chlorinometer Gas." A few days later this is followed by a statement for $6. Understand, this product was not ordered. The company was informed that no gas was desired, and that on receipt of the express charges it would be returned. They do not reply to this, but a month later again send a statement asking for a remittance. If you think this worth publishing, you are free to do so, only omitting my name.

———, M.D., Arkansas.

To the Editor:—I received the enclosed billhead and circulars from the Scientific Apparatus Company, Long Island City, N. Y. Later the American Railway Express brought a package to the office, and without my knowledge or consent, collected 40 cents express charges. I have written the concern to the effect that when they send me 40 cents I will return the unopened package at their expense.

Newton S. Bacon, M.D., Cambridge, Mass.

Answer.—The methods of the Scientific Apparatus Company, exemplified by the two letters printed above, are not such as to inspire confidence or engender good will. Business methods savoring of trickiness may pay concerns that do a fly-by-night business, but they will prove a heavy liability to a company that expects to build up good will.

HEADACHES OF WORKERS WITH DYNAMITE

To the Editor:—I have received inquiry regarding the causes, prevention and cure of headache suffered by those who handle dynamite. In a stone quarry near here, the laborers complain of severe headaches, which the usual headache remedies do not relieve. This, they assert, is not due to the explosion, the concussion or the fumes following the explosion, but merely to handling the explosive material.

Charles A. Wylie, M.D., Casey, Iowa.

Answer.—Workers in dynamite factories or with dynamite, as in quarry blasting, are subject to glyceryl trinitrate (nitroglycerin) poisoning. As would be expected from a knowledge of the pharmacology of the nitrite group, of which this is a member, the outstanding symptom is a throbbing headache, often of a violent nature. It is stated that the pain is made worse by lying down and is not alleviated by antipyretics, such as acetphenetidin, or by morphin. After some time, workers appear to develop an immunity to the glyceryl trinitrate; this immunity is quickly lost, however, by absence from contact with the dynamite for even as short a time as two days.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ARKANSAS: Little Rock, May 12-13. Sec., Reg. Bd., Dr. J. W. Walker, Fayetteville; Sec., Homeo. Bd., Dr. Allison A. Pringle, Eureka Springs; Sec., Eclectic Bd., Dr. C. E. Laws, Fort Smith.

DISTRICT OF COLUMBIA: Washington, April 14. Sec., Dr. Edgar P. Copeland, 104 Stoneleigh Court, Washington.

HAWAII: Honolulu, April 13. Sec., Dr. Guy C. Milnor, 401 Beretania St., Honolulu.

ILLINOIS: Chicago, April 14-16. Supt. of Regis., Mr. V. C. Michels, Springfield.

NATIONAL BOARD OF MEDICAL EXAMINERS: Written examinations in Class A medical schools. Parts I and II, June 24-26. All applications for this examination must be made on or before June 1. Sec., Dr. J. S. Redman, 1600 Walnut St., Philadelphia.

NEVADA: Carson City, May 4. Sec., Dr. S. L. Lee, Carson City.

NEW MEXICO: Santa Fe, April 13-14. Sec., Dr. W. T. Joyner, Roswell.

OKLAHOMA: Oklahoma City, April 14-15. Sec., Dr. J. M. Byrum, Shawnee.

Vermont February Examination

Dr. W. Scott Nay, secretary, Vermont Board of Medical Registration, reports the written examination held at Burlington, Feb. 10-12, 1925. The examination covered 12 subjects and included 90 questions. An average of 75 per cent. was required to pass. Four candidates were examined, all of whom passed. Three candidates were licensed by reciprocity and three by endorsement of credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
McGill University	(1919) 85.1, (1920) 86.0,	(1923)	84.4
University of Budapest, Hungary		(1919)*	82.9

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Georgetown University		(1923)	Dist. Colum.
Boston University		(1884)	Maine
McGill University		(1923)	New Hamp.

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Dartmouth Medical School		(1913)	Mass.
Columbia University		(1920)	Maine
Women's Medical College of the New York Infirmary for Women and Children		(1898)	New York

* Graduation not verified by American Medical Association.

Colorado January Examination

Dr. David A. Strickler, secretary, Colorado Board of Medical Examiners, reports the written examination held at Denver, Jan. 6, 1925. The examination covered 8 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 12 candidates who took the physicians' and surgeons' examination, 6, including one osteopath, passed and 6, including 4 osteopaths and one undergraduate, failed. Six candidates were licensed by reciprocity and 2 by endorsement of credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Colorado		(1924)†	78.3
Kansas City College of Medicine and Surgery		(1924, 2)	79.6, 79.6
St. Louis College of Physicians and Surgeons		(1923)	82.6
University of Heidelberg, Germany		(1909)*	79.8
Osteopath			82.0

College	FAILED	Year Grad.	Per Cent.
Hahnemann Medical College and Hospital		(1919)	68.0
Osteopaths		43.9, 60.7,	67.2, 68.5
Undergraduate			69.4

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Rush Medical College		(1919)	Illinois
Keokuk Medical College		(1906)	Texas
University of Louisville		(1897)	Kentucky
Johns Hopkins University		(1919)	New Jersey
Washington University		(1892)	Missouri, (1922) Nebraska

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Johns Hopkins University		(1922)	N. B. M. Ex.
University of Pennsylvania		(1922)	N. B. M. Ex.

* Graduation not verified by American Medical Association.

† This candidate has completed his medical course and received an M.B. degree and will receive his M.D. degree on completion of a year's internship in a hospital.

Medical Economics and Miscellany

RURAL MEDICAL SERVICE IN MASSACHUSETTS

The committee on rural health and medical service, appointed by the Public Health Council of Massachusetts in compliance with a resolution of the state legislature, has reported its findings.[1] A qualitative estimate of health services was considered impossible. The committee believed that the average citizen estimates quantitatively satisfactory medical attendance on the time it takes to call a physician and the time elapsing between this call and the arrival of the physician. Therefore, the survey undertook to determine the distances between rural communities and the nearest physicians, the conditions of the roads, the willingness of physicians to respond to calls from the fringes of their territories, and the usual charges for home visits. The inquiry also included distances from the more remote settlements to dentists and to hospitals, and the availability of nursing service.

Data were gathered by:

1. Visits of a field representative. Nearly every town[2] that lacked a resident practicing physician was visited.

2. Questionnaires sent to laymen and to physicians. All questionnaires covered the number and location of physicians practicing in the town, the cost of home and office visits, and the availability and cost of nursing, dental and hospital service. In addition, the laymen were queried as to their satisfaction with available medical service, their reasons for any dissatisfaction, and the commercial outlet of the town. The physicians were questioned as to the support given them by the inhabitants of the town, the percentage of collections, and their satisfaction with conditions of practice in that locality. They were asked whether any dissatisfaction was due to financial, social, living or educational conditions. Signatures were not requested.

3. Letters in the newspapers requesting information concerning inadequately served localities.

4. The analysis of certain vital statistics, to determine their bearing on the problems under investigation.

The results of this study are set down in minute detail for each county that might be supposed to have a rural medical problem. First hand data of great interest were obtained and were analyzed to find the causes of inadequate service and to suggest measures of relief.

The localities in which a shortage of physicians was most pronounced were usually situated in hilly or mountainous country, with unimproved roads, so that in winter, especially, physicians located from 5 to 10 miles away were unable or unwilling to serve the community. The time consumed in house visits under these circumstances necessitates an increased charge for home calls. The residents of these remoter districts live on a low economic plane, as evidenced by the unimproved roads. In many instances the field worker found that the physician's charges were considered reasonable by their patients and yet were quite beyond the ability of the latter to pay. In each locality that was noted as lacking in available medical service, the committee considered that the territory which a physician could reasonably cover did not include a sufficient number of inhabitants or enough wealth to give reasonable promise that a physician could earn an acceptable livelihood in it.

Several localities had obtained a resident physician by the payment of a bonus during the first year or several years.

1. Special Report of the Department of Public Health, Massachusetts, Relative to Health and Medical Service in Sparsely Settled Districts, House No. 1075, Boston, January, 1925.

2. In Massachusetts, the town is a political unit which may or may not embrace villages and towns proper.

The committee observed that this practice does not involve the objectionable principle of "state medicine," since the physician charges fees for his services and is still dependent on his own efforts to gain a livelihood. During most seasons he must still compete with other physicians. The problems that arise in connection with the renewal of an annual stipend are discussed. As time passes, the physician's clientele increases and in some cases grows from an inadequate to an adequate support. However, unless the movement of the general population from the country to the city is checked, the economic factors will increase rather than decrease the inability of certain locations to support a physician. At present, only a small percentage of the population of the commonwealth is without reasonably available medical service. The population of Massachusetts is nearly 4,000,000. Less than 6,000 are more than 6 miles from a physician. Of 118 towns selected as the most likely to experience shortage of medical service, only eighteen are more than 6 miles from one or more practicing physicians, and only five are more than 10 miles distant. In only seventeen towns, the average fee for a physician's house visit is more than $5. The physician's charge for a distant call, compared with garage charges for making the same trip, shows that the difference is less than the usual fee for the physician's house visit in his own village. This places no higher valuation on the time the physician spends on the road than if he were a taxi driver. Nor were garage fees excessive in consideration of the condition of the roads in the cases studied. Still, these charges are frequently beyond the means of the patient to meet them, and whatever medical shortage exists is more markedly due to the inability of the people to pay necessary charges than to inaccessibility to a physician. Not one of the nineteen towns most seriously lacking in medical service has a high school. All are far down on the scale of teachers' salaries in spite of differential state aid which favors these communities. This confirms the estimate of the committee that the locality unable to secure a physician is economically unable to support one. However, the committee does not absolve the rural communities from all responsibility for their own predicament. Many examples were found of lack of loyalty in supporting the local physician which was not based on his professional shortcomings. High standards of medical education are not considered responsible for the rural shortage of physicians.

Some complaints were received that public health nurses were rendering services at small cost which were formerly income-producing for the physician. The summary of the committee's report states that "where the activities of the public health nurse reduce medical practice it is evidence, per se, of a failure of the medical and nursing profession to work out policies and methods of nursing service in such a way as to give due consideration to professional interests and at the same time give the best possible service to the community."

The physicians who were dissatisfied with their locations were usually those whose collections were 75 per cent. or less. In several cases other physicians in the same locations, but noting much better collections, expressed themselves as satisfied.

The findings as regards hospitals show that better rather than more hospitals are needed. Only eight of the 118 towns studied are more than 20 miles from a hospital, and three of these, located at the end of Cape Cod, have transportation to city hospitals by state improved highways and by railroad. Hospital charges are in a chaotic state, but this is not peculiar to sparsely settled districts.

There seemed to be no shortage of dentists, although their services are not utilized as they should be. Only two towns are more than 20 miles from a dentist.

The legislature had specifically requested that the committee recommend any measures, legislative or otherwise, to relieve such shortage of medical and health service as they should find. Every constructive suggestion that has been offered was considered in the report. Temporary or winter service is shown to be impracticable, since the rural residents are most suspicious of any attempt to experiment on them. Many do without service, even in extreme cases, until a physician's ability has been evidenced. All forms of subsidy are discussed, pro and contra. The yearly locally paid subsidy is recommended for such places as can help a physician over the early lean years, and a more permanent one for a locality that can never expect to afford a physician a comfortable living on a fee basis. A comfortable living for a man supporting a family in Massachusetts today is placed at more than $2,000.

Another measure advocated by the committee is the establishment of state clearing houses to furnish reliable data to the location desiring a physician, concerning the physician's schooling and experience, and to give the physician in search of a practice the facts concerning prospective locations. These facts would cover the location of the nearest practicing physicians, the population to be served, the condition of the roads, and the wealth of the community. The final decision would be left to the physician; or, if a bonus is to be paid, the decision would be left to the locality and the physician. Such a clearing house might be maintained by the state medical society or the state board of health. Valuable work of this kind is being done by medical schools.

In conclusion, the committee recommends small subsidies to be increased by fees, better support of local physicians by rural areas, clearing houses for information, and an understanding between public health nurses and physicians.

THE GOVERNMENT BUREAU OF STANDARDS

The work of the Bureau of Standards at Washington is increasingly attracting the attention of physicians. The medical profession is dependent on numerous branches of physics and engineering. The bureau is one of the principal laboratories of the United States for the standardization, testing and carrying out of special investigations into the properties of matter and the laws of science. Studies of the germicidal effect of ultraviolet light have recently been completed, while the bureau's work on rare sugars has resulted in making several sugars, many of which are valuable in medical research, more convenient. Dextrose manufacture has been established on a commercial scale, and a process has been devised whereby levulose may be made at a lower cost than formerly. The bureau has played an important part also in the establishment of the optical glass industry, and does work in devising optical instruments to meet special demands. Practically all the radium preparations produced in the United States are sold in reference to findings of the bureau's radium laboratory. Research work on the exposure of laboratory workers to radium has been made, and investigation of roentgen-ray protective devices is planned as soon as money is available. In the standardization field, several investigations of especial interest to the medical profession are being carried out. Testing and certification of clinical thermometers is an important job of the bureau. Many of the building material tests conducted by the bureau are of interest to the medical profession as a result of the use of such materials in hospitals. Means of preparing special rubbers for medical purposes, investigations of stainless steel and of platinum substitutes, studies of enameled metals and of pottery and studies in illuminating engineering have been among the recent tasks of the bureau. Standards for sterilizing apparatus have been established, while the division of simplified practice has brought about the adoption of standard dimensions for hospital beds and bedding. Much work in connection with safety codes has

also been carried out, including a study of the precautions necessary in the use of gas in the home, study of the reaction time of automobile drivers, of the effectiveness of brakes, of the colors of traffic signals, of elevator door interlocks, of walkway materials, and of glasses for protecting the eyes from injurious rays and from missiles.

PHILIPPINE HEALTH SERVICE PERSONNEL

In a recent *Bulletin of the Philippine Health Service*, there are said to be eighty-one physicians commissioned in the service. Forty-three of these physicians are graduates of Santo Tomas University in the Philippines, twenty of the University of the Philippines, eight of American universities, and ten have no records of places of graduation. Seventy-eight of them are Filipinos, two Americans and one a Spaniard. Seventy-seven are men, and four women. Forty-nine officers have been in the Philippine Health Service from two to nine years, twenty-two health officers from ten to seventeen years, and ten from twenty to twenty-six years. The law prescribes a salary of 7,200 pesos (a peso amounts to 50 cents gold) for the director; for the assistant director, 6,000; for chiefs of divisions, 6,000; for district inspectors, 5,000; for senior medical inspectors, 4,000; for medical inspectors, 3,000; for senior surgeons, 2,400, and for surgeons, 1,800 pesos. There are, in addition, 233 physicians having appointments as presidents of sanitary divisions who take charge of one or a group of municipalities, not exceeding four, in each province. These presidents receive from 1,200 to 3,000 pesos per annum, as fixed by law. There is a total of 226 nurses in the employ of the Philippine Health Service, 1,457 assistant sanitary inspectors and a total of 146 vaccinators. District health officers usually take charge of the provinces, of which there are forty-eight. These officers belong to the commissioned personnel. There are also thirteen assistant district health officers, nine provincial dentists, three bacteriologists, three midwives and three pharmacists. In this large number of physicians, nurses, sanitary inspectors and vaccinators, only one holds a certificate of public health and another a degree of doctor of public health. Physicians in the future to be commissioned in the service will need to complete some postgraduate work in public health research as a requirement for entrance.

EXPERIMENTS WITH UNUSUAL VIRUSES

The U. S. Department of Agriculture relates that the European fowl pest that appeared in poultry flocks of this country last December never before existed in this country. It has been found, the report says, that an investigator working on filtrable viruses in a large Eastern institution introduced the virus of the European fowl pest in the summer of 1923, having obtained it from the Pasteur Institute in France, in which country the disease exists. There is a possibility that the disease was introduced through another channel, but this is the only known introduction of the virus. The disease first appeared in states where work was done with this virus, or in states close to them. An assistant took some virus to his father's home, where he inoculated chickens in order to have a supply of virus for investigation in the fall. Another investigator sent some virus to a "clean state" to be inoculated into chickens to be used to illustrate a lecture on this disease. The department of agriculture desires to emphasize that it does not permit the importation of animals from countries having destructive diseases which are not present here, and that it believes that our security depends on observing all precautions. Since it is against the policy of the department of agriculture to study dangerous foreign diseases in this country, other institutions should observe this policy. In recent weeks the department received a request from a scientist who desired to bring into this country from China laboratory animals that had been infected with kala azar. The request was disapproved. More recently a watchmaker from Switzerland visited the bureau, bringing a bottle of attenuated virus of foot and mouth disease, intending to try to fortify herds against the disease. The sample was destroyed. The Department of Agriculture has never permitted experimental work on foot and mouth disease in this country. The deficiency act, passed recently by Congress, provides money for the study of this disease by our scientists in countries where it regularly exists.

Book Notices

MEDICINE: AN HISTORICAL OUTLINE. By M. G. Seelig, M.D., Professor of Clinical Surgery in the Washington University School of Medicine. Cloth. Price, $2.25. Pp. 207, with illustrations. Baltimore: Williams & Wilkins Company, 1925.

In a foreword to this series of lectures on the history of medicine, Dr. Fielding H. Garrison notes particularly their unusual character, due to the freshness of the point of view of the author. The eight lectures given by Dr. Seelig at the Washington University School of Medicine were planned for senior students, primarily with the hope that they would constitute an invitation to further study. They are a rational outline of medical progress, and if they fail at all in their purpose it is because the necessity for brevity has prevented the inclusion of much anecdote and literary allusion that might have been provided in a more extensive work. The language is, as Dr. Garrison has pointed out, direct and, therefore, such as is likely to appeal to the medical student. We are told, for instance, that Paracelsus developed "a marked taste for what we should, today, call lowbrow company," and, again, that "he was by nature disputatious and disrespectful of authority, coarse to the point of vulgarity, and contentious to the degree of bullying. He usually thought straight and then smashed hard." Perhaps because the author has a rather marked leaning toward surgery, medicine seems to be somewhat in the background in some of his discussions. It has also been impossible for him to give a suitable meed of consideration to many of the cults and systems that branched off from medicine during the eighteenth and nineteenth centuries. Mesmerism, homeopathy and phrenology are dismissed with half a page each. In the same way, the brilliant discoveries of the latter half of the nineteenth century have had to be compressed into the brief space of a single lecture, which permits little more than the listing of names and dates. It is to be hoped that Dr. Seelig will have opportunity to extend his text, because the human interest with which he approaches the subject and his vigorous literary style will accomplish much to make medical students realize the importance of historical background.

DIE KONSTITUTION ALS FAKTOR IN DER PATHOLOGIE UND THERAPIE DER SYPHILIS. Von San.-Rat Dr. Karl Schindler, Facharzt für Hautkrankheiten in Fulda. Paper. Price, 3,60 marks. Pp. 120. Berlin: S. Karger, 1924.

The author shows that there is a wide variation in the amount of treatment needed to attain a negative Wassermann reaction in cases of syphilis that are clinically similar. For instance, a man still in the secondary stage of the disease required ten times as much treatment to change his serum test to negative as did his wife, infected by him and also in the secondary stage. If the husband's spirochetes were arsenic-fast, why did they not retain this resistance in the body of the wife? The answer is that it is not a difference in the germs, but a different ability on the part of the patient's constitution to react to the stimulation of treatment, that makes the greatly different response. If this difference exists in Wassermann positive cases it exists also in those with a negative serum; therefore even the earliest cases should receive several courses of treatment and be watched for a long time. Neither negative serum nor negative spinal fluid can be accepted as a sign of cure. Only freedom from spirochetes means cure, and there is no method of showing that. Recurrences of infectious lesions after ten years of serum negativity, and the finding of *Spirochaeta pallida* in apparently healthy tissues, demonstrate that no test can guarantee non-infectiousness. Some of the apparently cured are free from spirochetes; others are not, and it is impossible, clinically or serologically, to determine which are the safe ones.

Because we can never be sure of a cure even of patients who have been most faithful and most favorably affected by treatment, the author maintains that it is the duty of the syphilologist to refuse permission to marry to all syphilitic patients. He scouts the idea of neurotropic strains of spirochetes and makes a strong argument against this theory. Syphilis in the colored races, the ability of skin syphilis to protect against nerve syphilis, the course of syphilis in the aged, congenital syphilis, conjugal syphilis, and the so-called mild syphilis are all discussed in relation to the main theme, the action of the patient's constitution in response to treatment. A very interesting portion of the book is the treatise on the provocative reaction. The author believes that this is a misnomer, and the variations sometimes found in the Wassermann reaction after treatment would be found without the treatment. They are in his opinion only the fluctuations seen every now and then in weakly positive serums. He accuses some eminent syphilologists of teaching that a negative provocative test is a sign of cure of the disease, and is especially provoked by Zieler's assertion of Neisser's approval of such teaching. Schindler recalls that he also was an assistant of Neisser at the time Zieler was, and dramatically imagines a reunion of the three in the back room of the laboratory. He is sure that Neisser would decide in his, Schindler's, favor. The book is readable, interesting and stimulating, and should be read by every one who is treating syphilis, especially those who are teaching the subject. Although some of the views are extreme, the author's argument for more care in treating the patient rather than the disease and for greater conservatism in regard to cessation of treatment is most commendable, and is fully as applicable to this country as to Germany.

Outlines of Pathology. Edited by E. T. Bell. Cloth. Price, $3.50. Pp. 586. Minneapolis: University of Minnesota, 1924.

The modern medical student is confronted with a number of textbooks on the various fundamental subjects, from which he may choose. The present volume represents lectures in the courses in pathology at the University of Minnesota which were formerly given to students in mimeographed form. The volume itself is published by the university, and is intended not to take the place of the ordinary textbook, but merely as collateral reading. In its preparation, the specialists in various departments associated with pathology have cooperated. Obviously, a book of this sort is ephemeral, since it purposes to supplement ordinary textbook material and to provide the point of view of the individual instructor. No doubt, eventually it will develop into an established guide of a more clearly organized and permanent character. If there are any criticisms to be made at the present time, they would be based on minor omissions and forms of expression that undoubtedly will be picked up in the course of future revisions.

The Education of Handicapped Children. By J. E. Wallace Wallin, Ph.D., Director, Bureau of Special Education and Psycho-Educational Clinic, Miami University. Cloth. Price, $2.25. Pp. 394, with 20 illustrations. Boston: Houghton Mifflin Company, 1924.

This book presents in readable form an excellent review of the recognition and constructive treatment of the mentally handicapped child, including the blind and the deaf. The author has had wide experience in the public schools of St. Louis, and gives the results of his own studies as well as references to the work of others. Numerous well chosen statistical tables and historical reviews are given which will be found of value to all working in this field. The author takes a conservative attitude toward the results and meaning of the various forms of mental tests. The purpose and value of the special rooms in the schools, graded and ungraded, are discussed with admirable suggestions for points to be considered in their organization and operation. The bearings of experimental facts and studies of heredity and fecundity in families containing many feebleminded and delinquent members, the relations to crime, vice and dependence, the value to society of work done by properly trained mental defectives, and the problems of segregation, sterilization and registration as means for prevention are discussed with great conservatism and the introduction of interesting and valuable statistics. These should prove of great value to all who contemplate the advocacy of legislative control of the many problems involved. The student, also, will find helpful the appendix, in which are outlined some of the many methods of classification of mental defectives that have been advocated and adopted.

Clinical Studies in Epilepsy. Composed of Clinical Notes on Some Epilepsies as Bearing on the Pathogenesis of Idiopathic Epilepsy. By Donald Fraser, M.D., F.R.F.P.&S., Consulting Physician, Royal Alexandria Infirmary. Cloth. Price, $2.50. Pp. 243. New York: William Wood & Company, 1924.

As indicated in the subtitle, this book is a somewhat loosely connected presentation of a group of clinical cases. The introduction deals with a case studied over many years, with an extensive autobiography of the patient. Out of this has come the incentive for the author to discuss the pathogenesis of the diseases included under the title of epilepsy. Dr. Fraser accepts without question the view that the seizures are caused by vasoconstriction, and quotes extensively from Hughlings Jackson, Esquirol and others on the point. The causes of the vasoconstriction are many and include, in accordance with the work of Brown-Séquard, damage to the central nervous system together with some toxic factor. The material has evidently been collected with the object of establishing the views of the author, and the book cannot be recommended as an unprejudiced review of facts and theories. Though the volume contains practically nothing in the nature of an original contribution, it has the merit of a healthy optimism, and emphasizes well the needs for further researches and the possibilities for eliminating such vague conceptions as "idiopathic" and "hereditary predisposition."

The Rat. Data and Reference Tables for the Albino Rat (Mus Norvegicus Albinus) and the Norway Rat (Mus Norvegicus). Compiled and edited by Henry H. Donaldson. Memoirs of the Wistar Institute of Anatomy and Biology. No. 6. Second edition. Cloth. Price, $5 net. Pp. 469, with 73 charts. Philadelphia: Wistar Institute of Anatomy and Biology, 1924.

A host of investigators in this country and abroad have gathered data through research on the rat. Many of these facts are presented in this book. The chapters (illustrated with graphs, tables and pictures) on embryology, blood, teeth, bones, nervous and endocrine systems, the growth and weight of parts are of more than biologic interest. The rat lives thirty times as fast as man, its three-year span of life being approximately equivalent to man's ninety years. The data may be compared to corresponding data for man. The Norway rat, which is now established in China, Japan, India, western Europe and temperate North America, was observed crossing the Volga in large numbers in 1727, on its way to invade Europe. It arrived on the North Atlantic seaboard of the United States in 1775. The common albino rat used in laboratories is a variety of *Mus norvegicus*.

Englisch-Deutsches Medizinisches Wörterbuch. Von Dr. Moritz Kaatz. Third edition revised by Dr. Max Weiss. Cloth. Price, 5 marks. Pp. 193. Leipsic: Franz Deuticke, 1925.

German-English Medical Dictionary. By Joseph R. Waller, M.D. Fifth edition, improved and enlarged by M. White, M.D. Cloth. Price, 10 marks. Pp. 389. Leipsic: Franz Deuticke, 1925.

In the preparation of these brief dictionaries, the authors have attempted to supply simple definitions, usually in one or two words, and to add all the words that have recently come into medical use. While the German-English section is convenient, the English-German presents English spellings that are obsolete, and many words that could have but little use in the ordinary medical vocabulary. We cite, for example, "aguish," "apepsy," "ebriety," "enfamish" and "frigorific."

Practical Lectures. Delivered under the Auspices of the Medical Society of the County of Kings, Brooklyn, New York (1923-1924 Series). Cloth. Price, $5.50. Pp. 484, with 135 illustrations. New York: Paul B. Hoeber, Inc., 1925.

During the year 1922, the Medical Society of the County of Kings celebrated its one hundredth anniversary by the presentation of a series of lectures on practical medicine. This series has now been issued in book form. It covers many fields of medicine and includes numerous articles that will be of value to practicing physicians.

Medicolegal

Concealment from Patient of Insertion of Pessary

(Bryson v. Aven (Ga.), 124 S. E. R. 553)

The Court of Appeals of Georgia, Division No. 2, in reversing a judgment that was rendered in favor of the defendant, states in a brief syllabus the points decided, without an accompanying opinion. The syllabus says that the relation of patient and physician is a confidential one, and when in curetting a uterus it becomes necessary, in order to effect a successful result, to insert a pessary, a duty devolves on the physician to inform the patient within a resonable time of the use of the pessary, and direct her as to when it should be removed. A failure so to inform the patient is a fraud on her, and if injury result therefrom to the patient, a cause of action accrues at the time of the discovery of the fraud, or when, by the exercise of due care, the fraud might have been discovered by her, and not from the date of the injury, or the date of the operation.

In such a case the operation and the insertion of the pessary were not an invasion of a right, and no cause of action should accrue until the discovery of the fraud and the resulting injury arising therefrom. This ruling is not in conflict with the case of *Davis* v. *Boyett*, 120 Ga. 649, 48 S. E. 185, wherein there was an invasion of a right, and there existed no confidential relationship between the parties.

When suit was filed by the patient against a physician more than two years after the operation, but within only three months after the discovery of the alleged fraud, and it was alleged in the petition that an injury to the plaintiff resulting in a miscarriage on account of the failure of the physician to inform her of the presence of the pessary in the uterus and as to when it should be removed, a cause of action was set out and the suit was not barred by the statute of limitations. It was error to dismiss the petition.

Negligent Treatment of Wounds Adequately Alleged

(Dunn v. Duffey (Calif.), 228 Pac. R. 1029)

The Supreme Court of California, in reversing a judgment in favor of the defendant physician, says that one ground on which the defendant sought to support a general demurrer to the plaintiff's complaint was that it did not contain a sufficient allegation of negligence. The plaintiff was severely cut by glass on the second finger of her right hand, and alleged that the defendant failed and neglected to ascertain by the use of ordinary care and skill that the tendon was severed, and carelessly, negligently and unskilfully failed and neglected to sew up the said severed tendon under plaintiff's said injured finger. That was a sufficient allegation as against a general demurrer.

Another contention in support of such demurrer was that no facts were alleged showing a causal connection between the claimed negligent acts and the injuries complained of. There were allegations which stated in effect that (1) the tendon of plaintiff's finger had been severed by a piece of glass; (2) defendant, employed as a physician to treat said injury, failed to discover that the tendon had been severed; (3) the defendant failed to sew up the severed tendon, and (4) as a result of such failure to discover the severance of the tendon and the subsequent failure to sew it up, the plaintiff's right hand became permanently crippled. It seems to the court that the requirements of the rule that it must appear from the facts alleged that the negligence caused or contributed to the injury were sufficiently met.

Again, it was contended that to state a cause of action the complaint should have contained the allegation that good practice required that a severed tendon be sewed up, and that if the tendon had been sewed up no injury would have resulted. However, the allegation that the "defendant carelessly, negligently and unskilfully failed and neglected to sew up the said severed tendon under plaintiff's said injured finger," and that "as a result of the carelessness, negligence and unskilfulness of the defendant as hereinbefore stated, plaintiff's said finger has become useless and her right hand permanently crippled . . ." was in effect an allegation that the resultant injury was due to a failure by the defendant to sew up the severed tendon in the plaintiff's finger. That allegation was equivalent to an allegation that good practice required a severed tendon to be sewed up, and that if the tendon had been sewed up no injury would have resulted. By definitely placing the responsibility for the resultant injury on the defendant's failure to sew up the tendon, the allegation thereby obviously negatived the idea that the injury might have been permanent even if the tendon had been sewed up.

In the instant case the negligence was precisely described as a failure to sew up a severed tendon. It would be practically impossible to describe the negligence in more exact and explicit terms, and if the pleadings in this case would not suffice to bring the defendant into court, it is difficult to conceive of pleadings that would.

Nor does the court agree with the contention that a special demurrer on the ground of uncertainty was well founded. All that is required of a plaintiff, as a matter of pleading, even as against a special demurrer, is that his complaint set forth the essential facts of the case with reasonable precision and with sufficient particularity to acquaint the defendant with the nature, source and extent of the cause of action.

Unreasonable Giving of Right of Way to Physicians

(Kidd v. Chisell (Md.), 126 Atl. R. 82)

The Court of Appeals of Maryland, in reversing a judgment for the defendant and awarding a new trial, says that the plaintiff sought damages for personal injuries alleged to have been sustained because an automobile in which she was riding was struck on the left side by the defendant's car, at a street intersection. It was assumed by the plaintiff, and by her sister who was driving their car, that they had the right of way, and an alleged violation of that right was the primary ground of the liability asserted in this action. The defendant and his witnesses testified that he actually conceded the right of way to the other car and that the two cars never came into contact, but that the plaintiff's sister suddenly made their car swerve to the right and against a building. Instructions, granted at the defendant's request, informed the jury that he was entitled to the right of way if, as was proved without dispute, he was a duly registered physician and held a right of way permit issued by the city police department. These instructions were based on an ordinance of the city of Baltimore, enacted in 1908, giving priority in the use of the city streets to (1) officers and men of the fire department, with their fire apparatus of all kinds; (2) all ambulances; (3) officers and men and vehicles of the police department, and (4) all physicians who have police permits, the police department being empowered to issue, on application, a permit for such right of way to any duly registered physician. Questions were raised as to the effect and validity of this ordinance in view of a state statute that "all vehicles shall have the right of way over other vehicles approaching at intersecting roads from the left, and shall give right of way to those approaching from the right," which is one of the code provisions relating to motor vehicles which are intended to be state-wide in their effect, but which reserve the right to incorporated cities and towns to prescribe and enforce reasonable traffic regulations.

In the case of *State* v. *Brown*, 142 Md. 27, 119 Atl. 684, this Baltimore ordinance was held to be a valid exercise of the police power delegated to the municipality, as against a challenge of its validity made by demurrer to an indictment for the violation of the right of way allowed by the ordinance to an ambulance using the city streets. As applying to the individuals and vehicles embraced in the first three classes, the practicability of the ordinance cannot be doubted. They are all readily recognizable as having the functions which entitle them to the right of way given them in the use of the city thoroughfares. The uniforms of the firemen and policemen and the structure of the fire apparatus, ambulances and police cars immediately disclose their identity to those by whom the right of way must be yielded. But a physician or his car is not so easily distinguishable. It was said that the

defendant had a blue cross on his car, but the validity of the ordinance was to be decided according to its terms, and they did not provide that the display of a cross on a physician's car should be a condition of the exercise of the right of way allowed him, or that he should have such a privilege only when using a car or other vehicle of a designated type. It was not even stipulated that the right should be available to him only for the purposes of his professional duties. In the absence from the ordinance of any provisions to assure knowledge to the public of a superior right of way on the part of permit-holding physicians, its recognition in all instances could not reasonably be expected, and its attempted exercise would often be confusing and perilous. The question here was not whether the city could validly give physicians a general right of way on its streets under suitable regulations for the protection of the persons and interests affected, but whether an ordinance conferring the right without qualifying and safeguarding provisions, and therefore tending to jeopardize the public safety which the statutory right of way rule was intended to promote, was a valid exercise of the police power delegated to the city by the state, and was within the purview of the "reasonable traffic regulations" which the legislature authorized the city to prescribe and enforce. In the judgment of this court it was not, and an exception to the admission in evidence of the ordinance and of the permit issued to the defendant by the police department should have been sustained.

Workman's Right to Decline Operation

(Beaulieu's Case (Me.), 126 Atl. R. 376)

The Supreme Judicial Court of Maine affirms a decree which it says affirmed a decision of the chairman of the industrial accident commission, denying the petition of the insurance carrier to end compensation under the workmen's compensation act, to Beaulieu. The court does not state the nature of the man's injury, but says that it was contended that the right to compensation had ended because the claimant refused to submit to proper surgical attention offered him. It was argued that compensation claimants, to preserve their rights to compensation, must submit to any reasonable and proper treatment offered them, and certainly so if the treatment does not entail undue danger to life or extraordinary suffering. Without doubt, the overwhelming weight of authority holds that a man cannot continue to receive compensation and at the same time refuse to submit to proper medical or surgical treatment such as an ordinarily reasonable man would submit to in like circumstances. But in proceedings under the English compensation act it has been held that whether or not a workman is unreasonable in refusing to have an operation is a question of fact with which an appellate court will not interfere, where the physicians are not wholly agreed as to the advisability of the operation. In the case at bar the physicians and surgeons who testified were at variance as to the exact nature of the treatment which should be tried, and all practically admitted that any operation would be followed by great pain and inconvenience, and that the results of any treatment would be uncertain as to permanently successful results. The record fully justified the finding of the chairman of the commission that, "as a matter of fact," Beaulieu had not unreasonably refused to submit to proper surgical treatment.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., May 25-29. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Alabama, Medical Association of the State of, Birmingham, April 21-24. Dr. D. L. Cannon, 519 Dexter Avenue, Montgomery, Acting Secretary.

American Association for the Study of Allergy, Atlantic City, May 26. Dr. W. W. Duke, Federal Reserve Bank Bldg., Kansas City, Mo., Sec'y.

American Association of Genito-Urinary Surgeons, Washington, D. C., May 4-6. Dr. Henry G. Bugbee, 40 East 41st St., New York, Sec'y.

American Climatological and Clinical Association, Washington, D. C., May 4-5. Dr. Arthur K. Stone, Framingham Center, Mass., Secretary.

American Dermatological Association, Washington, D. C., May 4-6. Dr. Udo J. Wile, 9 Geddes Heights, Ann Arbor, Mich., Secretary.

American Gastro-Enterological Association, Atlantic City, May 25-26. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.

American Gynecological Society, Washington, D. C., May 4-6. Dr. Arthur H. Curtis, 104 South Michigan Avenue, Chicago, Secretary.

American Laryngological Association, Washington, D. C., May 4-6. Dr. George M. Coates, 1811 Spruce Street, Philadelphia, Secretary.

American Laryngological, Rhinological and Otological Society, Atlantic City, May 22-25. Dr. R. L. Loughran, 145 West 58th Street, New York, Secretary.

American Neurological Association, Washington, D. C., May 5-6. Dr. Frederick Tilney, 870 Madison Avenue, New York, Secretary.

American Ophthalmological Society, Washington, D. C., May 5-6. Dr. T. B. Holloway, 1819 Chestnut Street, Philadelphia, Secretary.

American Orthopedic Association, Washington, D. C., May 5-6. Dr. DeForest P. Willard, 1630 Spruce Street, Philadelphia, Secretary.

American Otological Society, Washington, D. C., May 4-5. Dr. T. J. Harris, 104 East 40th Street, New York, Secretary.

American Pediatric Society, Washington, D. C., May 4-6. Dr. H. C. Carpenter, 1805 Spruce Street, Philadelphia, Secretary.

American Proctologic Society, Atlantic City, May 25-26. Dr. J. F. Montague, 540 Park Avenue, New York, Secretary.

American Psychiatric Association, Richmond, Va., May 12-15. Dr. E. D. Bond, 4401 Market Street, Philadelphia, Secretary.

American Psychopathological Association, Washington, D. C., May 7. Dr. Sanger Brown, 2d, 173 East 70th Street, New York, Secretary.

American Society of Clinical Investigation, Washington, D. C., May 4. Dr. J. H. Austin, University of Pennsylvania, Philadelphia, Secretary.

American Society of Clinical Pathologists, Philadelphia, May 21-23. Dr. Ward Burdick, Metropolitan Building, Denver, Secretary.

American Society of Tropical Medicine, Washington, D. C., May 5-6. Dr. B. H. Ransom, P. O. Box 131, Pennsylvania Avenue Station, Washington, D. C., Secretary.

American Surgical Association, Washington, D. C., May 4-6. Dr. Robert B. Greenough, 8 Marlborough Street, Boston, Secretary.

American Therapeutic Society, Atlantic City, N. J., May 21-22. Dr. L. H. Taylor, The Cecil, Washington, D. C., Secretary.

American Urological Association, St. Louis, May 21-23. Dr. H. G. Hamer, Hume-Mansur Building, Indianapolis, Secretary.

Arizona Medical Association, Bisbee, April 16-18. Dr. D. F. Harbridge, Goodrich Building, Phoenix, Secretary.

Arkansas Medical Society, Little Rock, May 13-15. Dr. William R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Association for the Study of Internal Secretions, Atlantic City, May 26 Dr. F. M. Pottenger, Title Insurance Bldg., Los Angeles, Secretary.

Association of American Physicians, Washington, D. C., May 5-7. Dr. Thomas McCrae, 1929 Spruce Street, Philadelphia, Secretary.

California Medical Association, Yosemite National Park, May 18-21. Dr. Emma W. Pope, Balboa Building, San Francisco, Secretary.

Congress of Physicians and Surgeons of North America, Washington, D. C., May 5-6. Dr. W. R. Steiner, 646 Asylum Avenue, Hartford, Conn., Secretary.

Connecticut State Medical Society, Bridgeport, May 20-21. Dr. Charles W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Georgia, Medical Association of, Atlanta, May 13-15. Dr. A. H. Bunce, 65 Forrest Avenue, Atlanta, Secretary.

Hawaii, Medical Society of, Honolulu, April 24-27. Dr. Forest J. Pinkerton, 43-46 Young Building, Honolulu, Secretary.

Illinois State Medical Society, Quincy, May 19-21. Dr. Harold M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Des Moines, May 13-15. Dr. T. B. Throckmorton, Bankers Trust Building, Des Moines, Secretary.

Kansas Medical Society, Topeka, May 5-7. Dr. J. F. Hassig, 804 Elks Building, Kansas City, Secretary.

Louisiana State Medical Society, New Orleans, April 21-23. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 28-30. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.

Medical Library Association, Atlantic City, May 25-26. Miss H. Wilson, 535 N. Dearborn Street, Chicago, Secretary.

Medical Women's National Association, Atlantic City, May 25-26. Dr. B. M. Haines, Michigan Department of Health, Lansing, Secretary.

Minnesota State Medical Association, Minneapolis, April 27-29. Dr. E. A. Meyerding, 717 Commerce Building, St. Paul, Secretary.

Mississippi State Medical Association, Biloxi, May 12-14. Dr. T. M. Dye, McWilliams Building, Clarksdale, Secretary.

Missouri State Medical Association, Kansas City, May 5-7. Dr. E. J. Goodwin, 901 Missouri Theatre Building, St. Louis, Secretary.

National Association for the Study of Epilepsy, Richmond, Va., May 11-12. Dr. A. L. Shaw, 44 Church Street, Camden, N. Y., Secretary.

Nebraska State Medical Association, Lincoln, May 12-14. Dr. R. B. Adams, 1012 Terminal Building, Lincoln, Secretary.

New Hampshire Medical Society, Manchester, May 19-20. Dr. D. E. Sullivan, 7 North State Street, Concord, Secretary.

New York, Medical Society of the State of, Syracuse, May 12-14. Dr. E. L. Hunt, 17 West 43d Street, New York, Secretary.

North Carolina, Medical Society of the State of, Pinehurst, April 28-30. Dr. L. B. McBrayer, Southern Pines, Secretary.

North Dakota State Medical Asociation, Fargo, May 18-19. Dr. Alex. J. McCannel, Minot, Secretary.

Ohio State Medical Association, Columbus, May 5-7. Mr. Don K. Martin, 131 East State Street, Columbus, Executive Secretary.

Oklahoma State Medical Association, Tulsa, May 12-14. Dr. C. A. Thompson, 308 Barnes Building, Muskogee, Secretary.

Radiological Society of North America, Atlantic City, N. J., May 22-23. Dr. M. J. Sandborn, 844 College Avenue, Appleton, Wis., Secretary.

Rhode Island Medical Society, Providence, June 4. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

South Carolina Medical Association, Spartanburg, April 21-23. Dr. E. A. Hines, Seneca, Secretary.

Tennessee State Medical Association, Nashville, April 21-23. Dr. J. F. Gallagher, Jackson Building, Nashville, Secretary.

Texas, State Medical Association of, Austin, May 5-7. Dr. Holman Taylor, 207½ West 11th Street, Fort Worth, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL for a period of three days. No foreign journals are available prior to 1920, nor domestic prior to 1923. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

35: 151-288 (Feb. 15) 1925

*Arterial Hypotension. J. H. Barach, Pittsburgh.—p. 151.
Quantitative Test of Digestive Pancreatic Activity, Easily Applied Clinically. Tests for Volume of Pancreatic Juice and Bile Secretions. A. Bassler, New York.—p. 162.
*Blood Fibrin Changes in Various Diseases with Special Reference to Disease of Liver. J. S. McLester, M. T. Davidson and B. Frazier, Birmingham, Ala.—p. 177.
Respiratory Organs in Health and Disease. XIV. Vital Capacity of Lungs of Four Hundred and Nineteen Firemen. J. A. Myers and L. M. A. Maeder, Minneapolis.—p. 184.
*Pancreatic Enzymes in Cholecystitis. G. M. Piersol and H. L. Bockus, Philadelphia.—p. 204.
*Demonstration of Transient Jaundice in Gallstone Colic. E. Meulengracht, Copenhagen, Denmark.—p. 214.
Age Curve of Pulse Rate Under Basal Conditions. W. D. Sutliff and E. Holt, New York.—p. 224.
*Sugar Content of Cerebrospinal Fluid and Its Relation to Blood Sugar. G. M. Goodwin and H. J. Shelley, New York.—p. 242.
*Vital Capacity as Functional Test in Heart Disease. T. Ziskin, Minneapolis.—p. 259.
Therapeutic Value of Pneumococcus Antibody Solution Subcutaneously Administered in Lobar Pneumonia. W. W. Oliver and E. A. Stoller, Brooklyn.—p. 266.

Arterial Hypotension.—The incidence of arterial hypotension Barach found to be fairly constant. In a number of groups of subjects in apparent good health it was present in about 3.5 per cent. The individual who has hypotension is physically subnormal and is of the hyposthenic or asthenic type. He has been endowed with a poor respiratory apparatus. All the evidence, when correlated, seems to point significantly to the deduction that when there is a respiratory deficit and decreased oxidation, then there occurs hypotension. If this holds good in the light of further experience and observations, then, in stating the causative factors of arterial pressure, Barach says, it must be said that arterial pressure is dependent on energy of the heart, the resistance in the arteries, and the quantity and character of the blood. But the first factor is "respiratory effort and oxygenation."

Blood Fibrin Changes in Disease.—One of the main factors brought out by McLester et al. is the general fact that blood fibrin varies markedly in disease, and that the direction and extent of this deviation from the normal depends on the nature of the pathologic process.

Pancreatic Enzymes in Cholecystitis.—A series of twenty-six cases having normal gall tracts were studied by Piersol and Bockus by the Einhorn agar tube method for pancreatic enzymes, using the fasting duodenal juice for the determination. They found the average amount of enzymes to be: amylopsin, 8.3 mm.; trypsin, 5.0 mm., and steapsin, 3.5 mm. Forty cases of cholecystitis were studied in a similar manner. The range of fluctuation in the amount of enzyme was found to be greatly reduced in gallbladder disease. This was particularly true of steapsin. A considerable number of cases of gall tract disease had one or more enzymes absent. The average amount of each enzyme in cholecystitis was reduced to more than 50 per cent. of the normal amounts. Eighty-five per cent. of all cases of gallbladder disease studied had a reduction of over 50 per cent. in the amount of one or more of the enzymes. The fat splitting enzyme was more consistently reduced in amount. Trypsin was a close second. A few cases of gallbladder disease presenting symptoms for less than two years had no appreciable reduction in the amount of enzymes. After two years, the duration of symptoms bears no relation to the degree of reduction of enzymes. Eight cases of cholelithiasis showed an average reduction below normal in the quantity of enzymes corresponding closely to the reduction in the general cholecystitis cases.

Diagnostic Value of Transient Jaundice.—Meulengracht asserts that the diagnostic value of jaundice in cholelithiasis is considerably enhanced if the slight or occult degrees are searched for. It will then appear that a considerably larger proportion of the cases than is generally believed are accompanied by slight transient jaundice. The chief point, if it is desired to make use of jaundice as the basis of differential diagnosis, is to select the right time. The mode of procedure must, therefore, be to instruct the patient in doubtful cases, in which there is a suspicion that he is suffering from gallstones, to present himself or send for the doctor when there has been an attack of pain, so as to afford him the opportunity of investigating whether jaundice in any of its manifestations occurs in direct association with such an attack.

Spinal Fluid Sugar Content.—To be of value in determining whether or not a spinal fluid sugar is high or low, Goodwin and Shelley insist that the fluid must be taken after a night's fasting and the sugar content compared to that of the blood taken at the same time. The sugar content of the cerebrospinal fluid is not constant in the same person. There is no level, within reasonable limits, which might be considered normal for different persons. There is a definite relationship between the sugar content of the cerebrospinal fluid and of the blood, which may be expressed as the percental relation of the sugar content of the cerebrospinal fluid to the sugar content of the blood. This figure lies with fair constancy within the limits of 45 and 65 per cent. The ingestion of carbohydrate in sufficient quantities causes a definite and constant rise in the sugar content of the cerebrospinal fluid and disturbs the usual relationship between the sugar content of the cerebrospinal fluid and that of the blood. Meningitis, whether tuberculous, of staphylococcus or meningococcus origin, frequently gives a low sugar content of the cerebrospinal fluid, both as to actual milligrams per hundred cubic centimeters and in relation to that of the blood. The literature shows a high sugar content of the cerebrospinal fluid in relation to the sugar content of the blood in cases of encephalitis. Untreated cases of early cerebrospinal syphilis give a low actual and relative sugar content of the cerebrospinal fluid. Under treatment, this figure returns to normal. Considering the fact that the sugar content of the spinal fluid is lowered with a fair degree of constancy in cases of tuberculosis, meningococcus and staphylococcus meningitis, a low figure after intraspinal administration of antimeningococcus serum is of no diagnostic value.

Vital Capacity in Heart Disease.—Ziskin found the vital capacity of value in the study of heart conditions. There is no definite relationship between the vital capacity and cardiac efficiency in ambulant cardiac patients. There is no definite relationship between the vital capacity and the type of heart lesion.

Archives of Otolaryngology, Chicago

1: 131-265 (Feb.) 1925

*Bronchopneumonia and Abscess Secondary to Tonsillectomy. J. Daland, Philadelphia.—p. 131.
*Lung Abscess Following Tonsillectomy. M. C. Myerson, Brooklyn.—p. 137.
Diagnostic Significance of Audiometer Curves. C. C. Bunch, Iowa City.—p. 147.
Laryngostomy for Laryngeal Stenosis. G. Tucker, Philadelphia.—p. 157.
Laryngostasis and Laryngostat. C. Jackson, G. Tucker and L. H. Clerf, Philadelphia.—p. 167.
Study with Webster Phonometer of Sounds Emitted by Different Parts of Tuning Fork Prongs. R. Sonnenschein, Chicago.—p. 170.
Diabetes in Otolaryngology. B. E. Hempstead and S. F. Adams, Rochester, Minn.—p. 181.
Diagnostic Problem in Status Lymphaticus. J. A. Babbitt, Philadelphia.—p. 186.
*Acute Toxic Meningo-Encephalitis of Otorhinogenic Origin. C. F. Yerger, Chicago.—p. 198.
Contraindications to Bronchoscopy. E. H. Funk, Philadelphia.—p. 209.
Nature of Impulse Which Affects Crista Ampullaris of Semicircular Canals. F. J. Novak, Jr., Chicago.—p. 213.
*Diphtheria of Ear. D. W. Drury, Boston.—p. 221.
Physiology of Larbyrinth. J. G. Wilson, Chicago.—p. 231.

Complications Secondary to Tonsillectomy. — Daland believes that many unpleasant sequelae of tonsillectomy may be avoided by preoperative treatment, such as division of the cryptal walls; suction drainage, and the taking of calcium

chlorid, autogenous vaccine, tincture of digitalis, tincture of nux vomica and whisky, for one week before and after operation in the case of senile, asthenic and cardiac patients. In the postoperative period, rest in bed and the judicious use of morphin, atropin, whisky, digitalis, nux vomica and laxatives are indicated. The patient should rest on the side, with the head turned so as to facilitate the escape of saliva and blood. Hawking, clearing the throat and talking should be avoided.

Lung Abscess Following Tonsillectomy.—Myerson says that all tonsillectomy patients should be given a careful preoperative survey, with special reference to the pulmonary tract. More acute and complete histories should be taken in these patients, to rule out previous pulmonary disease. Physical examination should be performed as a routine. It should always be the aim to avoid the distressing complication of lung abscess. In the presence of known pulmonary disease, one should be forewarned and plan operative procedures accordingly.

Meningo-Encephalitis of Otorhinogenic Origin.—Yerger cites four cases of acute toxic meningo-encephalitis of otorhinologic origin. Timely drainage of the focus of infection will result in a cure. The preoperative diagnosis of this condition determines immediately the mode of surgical procedure indicated. Otitic brain abscess has not infrequently been mistaken for this condition, a diagnostic error leading to unnecessary and uncalled for intracranial exploration.

Diphtheria of Ear.—Drury reviews the literature and reports two cases of diphtheria of the ear. Otitic diphtheria apparently is spread through the blood rather than directly from the pharyngeal space. Purulence may be the only clinical evidence of diphtheria of the middle ear. Drury urges that routine bacteriologic examinations should be made of all ear discharges. This applies equally to mastoid operations. Diphtheria is less destructive to the middle ear than is scarlet fever or measles. Diphtheria of the ear does not represent a genuine disease, but occurs as one of the symptoms of a general infection.

Archives of Surgery, Chicago

10: 601-812 (March) 1925

*Abnormal Arteriovenous Communications, Acquired and congenital. M. R. Reid, Cincinnati.—p. 601.
*Splenic Anemia; End Results With and Without Splenectomy. Thirty-Five Cases. E. M. Hanrahan, Jr., Baltimore.—p. 639.
*Splanchnic Anesthesia: Analysis of Forty-Two Cases. W. R. Meeker, Rochester, Minn.—p. 699.
Meckel's Diverticulum; Twelve Cases. F. S. Mathews, New York.—p. 720.
Treatment of Fractures of Shaft of Femur in Children; Thirty-Two Cases. L. B. Johnston, Cincinnati.—p. 730.
*Lymphaticostomy; Thoracic Duct Drainage in General Peritonitis. E. P. Lehman and G. H. Copher, St. Louis.—p. 742.
*Tuberculosis of Joints. L. W. Ely, San Francisco.—p. 751.
*Liver Function in Acute Intestinal Obstruction. R. Colp, New York, and H. W. Louria, Brooklyn.—p. 756.
Injuries to Carpal Bones; Fracture of Scaphoid and Dislocation of Semilunar. F. F. McGauley, Schenectady, N. Y.—p. 764.
Review of Urologic Surgery. A. J. Scholl et al., Los Angeles.—p. 774.

Abnormal Arteriovenous Communications.—This is the first of a series of papers on abnormal arteriovenous communications. A report of thirty-three cases is made. Of these, twenty-seven were acquired and six were congenital. The locations of these communications were: femoral, eight; intracranial, six; subclavian, five; popliteal, three; carotid, two; head, four; hand, two; lip, one; eyelid, one; tibia, one. Twenty-six patients were cured; three were improved; two were not treated, and two died.

Splenic Anemia.—Thirty-five cases of splenic anemia are reported by Hanrahan. Twenty-two patients were subjected to splenectomy, while the remainder, thirteen, with the exception of two, were not operated on. Of the two exceptions, one was operated on for a femoral hernia, and a small piece of spleen was removed for microscopic study. Splenectomy was attempted but abandoned in the second case after a small splenule had been excised for study. These thirty-five cases have been studied for the purpose of determining the presence of any etiologic factors, the characteristic or average blood picture of the condition, the possible bearing of certain features on the prognosis, and both the immediate and late effects of splenectomy. They were also classified according to the duration of symptoms, and the end-results were studied on this basis. The "Bowman case" previously reported by Osler, by Cushing and MacCallum and often referred to in literature, has been restudied, and the results of an examination twenty-five years after splenectomy are given in detail. As far as it is known, this is the longest "cure" reported in this condition.

Splanchnic Anesthesia.—Clinical experience with splanchnic anesthesia, Meeker says, proves it to be inefficient, since, by its use, a complete surgical anesthesia of the abdominal cavity is not produced. It is the least important of all the factors concerned in the success of an abdominal operation under local anesthesia. Besides the production of an inadequate intra-abdominal anesthesia, splanchnic nerve block is not free from danger, a fact acknowledged by most users of the method. Four deaths in a collected series of 1,375 operations is a higher mortality than that recorded for spinal anesthesia.

Thoracic Duct Drainage in Peritonitis.—As a result of their study and an experience with a single clinical case, Lehman and Copher conclude that thoracic duct drainage is *sub judice*. Theoretically, a reasonable conception, neither experimentation nor one single clinical experience offers proof that it is of real merit. Costain's experimental evidence is open to the criticism that his control "lethal standard" is not necessarily lethal.

Tuberculosis of Joints.—Ely reports a case of multiple involvement occurring in the course of an untreated tuberculosis of a single joint, a true metastasis, a good example of a so-called "focal infection." He describes in full the tuberculous joint of a finger that had been amputated.

Liver Function in Acute Intestinal Obstruction.—The phenoltetrachlorphthalein test was performed by Colp and Louria in a series of thirteen dogs in which some portion of the small intestine had been obstructed. The results showed a slight degree of retention, the average reading varying between 1 and 3 per cent. at the end of fifteen minutes. In one dog, there was a 7 per cent. retention. Necropsy showed that the gallbladder was uniformly distended with bile of normal appearance. The contents of the intestine above the level of the obstruction were stained with bile. In two dogs, in whom a biliary fistula was created simultaneously with the production of the intestinal obstruction, there was no apparent decrease in the drainage of bile, even when the animals were moribund. Necropsy showed no gross change in the liver. Histologic examination of sections of the liver removed at necropsy revealed no structural changes.

Boston Medical and Surgical Journal

192: 379-426 (Feb. 26) 1925

Operative Treatment of Varicose Ulcer. J. Homans, Boston.—p. 379.
Importance and Unimportance of Murmur. W. H. Robey, Boston.—p. 384.
*Is Quinidin of Value in Treatment of Auricular Fibrillation. S. A. Levine and A. Wilmaers, Boston.—p. 388.
*Digitalis and Regular Rhythm. C. B. Leech, Fall River, Mass.—p. 393.

Quinidin Sulphate in Auricular Fibrillation.—Quinidin sulphate was administered by Levine and Wilmaers to thirty-seven hospital patients with auricular fibrillation, and one with auricular flutter. Special attention was given to the changes in the vital capacity of the lungs as a result of the use of this drug. The rhythm of the heart became regular in thirteen cases; auricular flutter was observed in five, and there were three unexpected fatalities. In only four cases did the regular rhythm last more than one month, and in none more than nine months. No important changes in the vital capacity of the lungs were found that could be attributed to quinidin. The authors are of the opinion that this study shows that quinidin sulphate is of no practical value in the treatment of patients with auricular fibrillation who previously had congestive heart failure. The more conservative treatment with digitalis is the more satisfactory.

Digitalis and Regular Rhythm.—In Leech's experience digitalis is useful in many cases presenting regular rhythm, especially if there is congestive circulatory failure. Patients

should be digitalized. Eight cases of arteriosclerotic heart disease, regular rhythm, were digitalized. In six there was clinical improvement. Ten cases of myocardial insufficiency were digitalized. In five cases there was clinical improvement. In six cases of rheumatic heart disease, regular rhythm, without failure, there was no evidence that digitalization was of benefit. Four cases of rheumatic heart disease, mitral stenosis, regular rhythm, and congestive circulatory failure, were improved clinically by digitalization. In one case of mitral stenosis, digitalis produced a depression of auricular conduction (prolonged P R interval) coincident with marked clinical improvement. Aortic regurgitation does not contraindicate the use of digitalis. In a case of complete heart block, congestive failure, digitalis produced clinical improvement. In this case the author considers that the digitalis effect was probably a direct effect on the ventricular musculature. In eighteen cases of relative high diastolic blood pressure there was no evidence of effect from small doses of digitalis. Small doses of digitalis produced no constant or marked change in pulse pressure, systolic pressure and heart rate. There was no evidence that small doses of digitalis were of value in mitral stenosis, angina pectoris, hypertension and myocardial insufficiency.

Journal of Experimental Medicine, Baltimore

41: 179-313 (Feb. 1) 1925

*Skin Infection of Rabbits with Hemolytic Streptococci Isolated from Patient with Erysipelas. I. Method of Demonstrating Protective Action of Immune Serums. T. M. Rivers, New York.—p. 179.
Local Passive Immunity in Skin of Rabbits to Infection with (1) Filtrable Virus, and (2) Hemolytic Streptococci. T. M. Rivers and W. S. Tillett, New York.—p. 185.
Microbic Virulence and Host Susceptibility in Paratyphoid-Enteritidis Infection of White Mice. VI. Relative Susceptibility of Different Strains of Mice to per os Infection with Type II Bacillus of Mouse Typhoid (Bacillus pestis caviae). I. W. Pritchett, New York.—p. 195.
Id. VII. Seasonal Variation in Susceptibility of Different Strains of Mice to Per Os Infection with Type II Bacillus of Mouse Typhoid (Bacillus pestis caviae). I. W. Pritchett, New York.—p. 208.
*Pathology of Experimental Virus Encephalitis. I. An Exotic Strain of Encephalitogenic Virus. S. Flexner and H. L. Amoss, New York.—p. 215.
*Id. II. Herpetic Strains of Encephalitogenic Virus. S. Flexner and H. L. Amoss, New York.—p. 233.
*Comparison of Effects of Roentgen-Ray and Dry Heat on Antibody Formation. J. B. Murphy and E. Sturm, New York.—p. 245.
*Influence of "Diaplyte" Antigen of Dreyer on Tuberculosis of Guinea-Pig. J. J. Bronfenbrenner and E. L. Straub, New York.—p. 257.
*Epidemiologic Studies on Respiratory Infections of Rabbits. VI. Etiology of Otitis Media. D. T. Smith and L. T. Webster, New York.—p. 275.
Oxidation and Reduction by Pneumococcus. VIII. Nature of Oxidation-Reduction Systems in Sterile Pneumococcus Extracts. J. M. Neill and O. T. Avery, New York.—p. 285.
*Oxidation-Reduction of Hemoglobin and Methemoglobin. I. Changes Induced by Pneumococci and by Sterile Animal Tissue. J. M. Neill, New York.—p. 299.

Hemolytic Streptococcus in Erysipelas Lesion.—Cultures of a hemolytic streptococcus isolated from a human case of erysipelas were tested by Rivers for ability to produce lesions by injecting various amounts intradermally in shaved rabbits. Severe lesions could be developed at will in this way despite the fact that intravenous or intraperitoneal inoculations of large doses of the cultures failed to kill. The lesions were of two sorts, phlegmonous and erysipelas-like. A serum capable of warding off the injurious action of the streptococcus on the skin was procured from animals receiving repeated intracutaneous inoculations of the organism. Normal serum by contrast had no protective effect. By intradermal injections at several points in the same normal rabbit of small quantities of mixtures of equal parts of serum and various dilutions of a suspension of streptococci, it proved possible to test serums for the presence of substances protective against the streptococcus.

Experimental Virus Encephalitis.—Flexner and Amoss give an account of an inoculable virus disease produced in the rabbit with cerebrospinal fluid taken from a case of vascular and neural syphilis. The name virus encephalitis is proposed for the experimental disease produced in rabbits by the inoculation of the herpes and allied viruses.

Herpetic Strains of Encephalitogenic Virus.—In this paper Flexner and Amoss show that unequivocal strains of herpes virus exist in man, which, in the rabbit, exhibit a degree of encephalitogenic power not exceeded, and perhaps rarely equalled, by any strain of the so-called encephalitis virus.

Effect of Roentgen Ray and Heat on Antibody Formation.—Rabbits irradiated in doses sufficient to reduce the amount of their lymphoid tissue without damage to the bone marrow showed a definite deficiency in the production of precipitins, bacterial agglutinins and protective antibodies. On the other hand, rabbits subjected to exposures of dry heat sufficient to increase the activity of the lymphoid organs, on immunization develop antibodies in larger quantity than do untreated animals immunized by the same process.

Effect of Diaplyte Antigen on Tuberculosis.—Bronfenbrenner and Straub have prepared "diaplyte" antigen according to Dreyer's procedure and have studied its therapeutic and prophylactic value in experimental tuberculosis of guinea-pigs. In their hands it has failed to yield beneficial effects. The animals treated with the antigen tended in general to develop lesions more quickly and to die earlier than the controls.

Etiology of Otitis Media.—A common form of otitis media occurring in rabbits is described by Smith and Webster. The condition in the great majority of instances is associated with the inflammation of the upper respiratory tract known as snuffles and with the presence of *Bacterium lepisepticum*. This organism, when introduced into the external nares of rabbits hitherto protected from infection with it, is capable of inducing a purulent otitis media indistinguishable from the natural one.

Changes Produced by Sterile Animal Tissue.—Quantitative evidence is presented by Neill of the reduction of methemoglobin to hemoglobin by sterile animal tissues. The possible relations of this activity to the disappearance of methemoglobin from the blood stream of the living animal are discussed.

Journal of Laboratory and Clinical Research, St. Louis

10: 259-336 (Jan.) 1925

*Efficacy of Certain Antidotes in Treatment of Acute Mercuric Chlorid Poisoning. W. H. Zeigler, Charleston, S. C.—p. 259.
Effect of Hemolysis on Calcium and Inorganic Phosphorus Content of Serum and Plasma. C. C. Wang and A. R. Felsher, Chicago.—p. 269.
*Spinous Cell Carcinoma. L. A. Turley, Oklahoma City, Okla.—p. 272.
Adequate Laboratory Service for Hospital. P. Hillkowitz, Denver.—p. 278.
Occurrence of Paratyphoid Agglutinins in Specimens Submitted for Typhoid Agglutination Test. R. Gilbert and W. M. Groesbeck, Albany, N. Y.—p. 282.
*Pharmacology of Benzyl Alcohol and Its Esters. IV. Diuretic Effect of Benzyl Alcohol, Benzyl Acetate and Benzyl Benzoate. C. M. Gruber, St. Louis.—p. 284.
Preparation of Satisfactory Poikilothermous Animal. R. W. Keeton, Chicago.—p. 294.
Fractionation of Proteins of Rattlesnake Venom. W. H. Welker, Chicago.—p. 298.
Quantitative Wassermann Test. E. H. Ruediger, Los Angeles.—p. 303.
Preparation of Colloidal Gold Solution by Mellanby-Anwyl-Davies Technic. R. L. Haden, Kansas City, Kan.—p. 310.
Studies with Cresylecht Violet. B. G. R. Williams, Paris, Ill.—p. 312.
Red Corpuscle Suspension for Kilmer-Wassermann Reaction. C. E. Reyner, Detroit.—p. 315.
Nonprotein Sulphur of Blood. M. Kahn and R. S. Postmontier, New York.—p. 317.
Certified Stains, What They Are, and How to Obtain Them. H. J. Conn, Geneva, N. Y.

Treatment of Mercuric Chlorid Poisoning.—Zeigler recommends the following treatment in mercuric chlorid poisoning, the procedure depending on the amount of corrosion produced by the drug: If the patient is seen immediately after taking the chemical, undoubtedly the washing out of the stomach with a 1:1,000 unfiltered solution of calcium sulphid is the best treatment. This should be followed by the administration of about 300 c.c. of mucilage of acacia (U. S. P.). If vomiting has already occurred, the same treatment would be used, but if other gastro-intestinal symptoms are present, calcium sulphid is contraindicated. The stomach should be washed out with care and quantities of mucilage of acacia given both by mouth and by high colonic injection. A mild cathartic should also be given. If the patient develops anuria, efforts should be made to restore this function. A mixture of

potassium acetate, caffein citrate and infusion of digitalis should be given every four hours for several days. Other well known methods of elimination should be used. Zeigler does not believe that a satisfactory antidote has been found which when injected intravenously will change the mercury into a less corrosive salt. The whole treatment of acute mercury poisoning should be aimed against absorption, to prevent the local effect, and to increase as rapidly as possible the elimination and prevent the reabsorption of the drug.

Spinous Cell Carcinoma.—The principal point made by Turley is that the spinous cell carcinoma is a very common tumor. It can and does occur on any part of the body where stratified squamous epithelium is found. It is most common, however, in localities where the epithelium is kept moist, in other words on the interior, such as the mouth, esophagus, anus, vagina and cervix uteri. In the latter site, it is the most common tumor. In this location also it is found in its purest form. The etiologic factors which seem most potent in the origin of these tumors are long standing mild inflammation or trauma, or both. In the cervix it is chronic cervicitis or endocervicitis alone, or together with erosion, or the previously mentioned inflammatory conditions involving an area of cervical repair where the epithelium has been turned in.

Pharmacology of Benzyl Alcohol.—The pharmacology of benzyl alcohol and its esters was studied by Gruber. He found that benzyl alcohol and its esters, benzyl acetate and benzyl benzoate, cause increased urine secretion when given intravenously, intramuscularly or intraperitoneally. The latent period between the intraperitoneal injection and the beginning of increased urine secretion in twenty-two animals was found to be seven minutes with benzyl alcohol; eight minutes in ten animals with benzyl acetate and nineteen minutes in seven animals with benzyl benzoate. Benzyl alcohol was found to increase the rate of urine flow 171 per cent. in twenty-two animals, benzyl acetate 182 per cent. in ten animals, and benzyl benzoate 215 per cent. in seven animals, an average of 190 per cent. for the entire series. The point of action of the drug has not been determined.

Journal of Radiology, Omaha

6: 1-40 (Jan.) 1925

Diminished Intervertebral Foramina as Cause of Brachial Neuralgia or Brachial Neuritis. L. G. Cole, New York.—p. 1.
Treatment of Cancer of Tongue by Implantation of Bare Glass Tubes Containing Radium Emanation; Report of Thirty Cases. F. E. Simpson, Chicago.—p. 5.
Diathermy in Urology. A. G. Fleischman, Des Moines, Iowa.—p. 7.
Internal Application of Heat by Means of Electric Currents. C. F. Bowman, West Lafayette, Ind.—p. 10.
Roentgen-Ray Treatment of Tonsils and Adenoids. A. L. Yocum, Jr., Chariton, Iowa.—p. 13.
Present Status of Deep Roentgen-Ray Therapy. N. R. Newcomer, E. Newcomer and C. A. Conyers, Denver.—p. 16.

Journal of Urology, Baltimore

12: 131-256 (Feb.) 1925

*Radium Removal of Carcinoma of Bladder. B. S. Barringer, New York.—p. 131.
*Treatment of Teratoid Tumors of Testis with Radium and Roentgen Ray. A. L. Dean, Jr., New York.—p. 149.
Spermatozoa of Guinea-Pig. B. A. Cody, Stanford University, Calif.—p. 175.
*Impotency in Young Men. W. J. Wallace, Oklahoma City.—p. 193.
*Gangrene of Bladder. W. J. Carson, Baltimore.—p. 205.
Vesical Calculi on Foreign Bodies. C. McMartin, Omaha.—p. 219.
*Granuloma Inguinale. A. R. Fraser, Cape Town, S. Africa.—p. 227.
Simple Table for Cystoscopy and Roentgenography. H. C. Bumpus, Jr., and W. F. Braasch, Rochester, Minn.—p. 247.
New Improved Urologic Table. G. Greenberg.—p. 251.

Radium Removal of Carcinoma of Bladder.—Of twenty-three cases of papillary carcinoma of the bladder treated by Barringer, in fifteen the carcinoma has been removed, in six the result has not yet been determined, and two patient's are dead or dying. Of sixty-one cases of infiltrating carcinoma of the bladder, eighteen patients are well; results are not yet determined in thirteen cases; thirty patients are dead or dying. A large majority of cases of both papillary carcinoma and infiltrating carcinoma have involved the bladder trigone and bladder neck. Of fifteen cases of papillary carcinoma, the tumor has been removed intravesically in twelve cases, and suprapubically in three cases. In eighteen cases of infiltrating carcinoma, the tumor was removed intravesically in six cases, and suprapubically in twelve cases. The operative mortality of suprapubic implantation of radium in infiltrating carcinoma is less than 2 per cent.

Radiotherapy of Tumors of Testis.—Dean reports his results in sixty-three cases treated with radium and the roentgen ray. He feels that simple orchidectomy alone is usually ineffective in achieving permanent relief. Preoperative irradiation of the primary tumor is most essential. Dean's results show 23 per cent. lower mortality in the group which received such a preliminary treatment, compared with that which did not. With adequate roentgen-ray facilities at hand, the radical dissection of the lumbar and pelvic lymphatics seems to be an unnecessary surgical procedure. The high voltage roentgen ray has been found to possess certain advantages over the radium pack, and no disadvantages of its use have appeared as yet. Dean treated seven patients with operable tumors; of these, five are living apparently free from disease. Of forty-nine patients first seen with inoperable metastases, ten are now free from signs of disease. External irradiation alone was used in this group of cases. The fact that practically every patient was benefited to some appreciable degree suggests that when technic and management become more nearly perfect the results will demonstrate more clearly the efficacy of the physical agents in the treatment of the teratoid tumors of the testis.

Impotency in Young Men.—Wallace feels that in cases of impotency, especially in those cases which he classifies as atonic, the importance has been greatly overemphasized and that only by painstaking physical examination, and patient attention to the correction of existing pathologic conditions can these sufferers be given any real or lasting relief.

Gangrene of Bladder.—Three cases of gangrene of the urinary bladder found at necropsy are reported by Carson. One case occurred with a urethral stricture, one in the course of typhoid and the third is the first case found in pernicious anemia.

Granuloma Inguinale. — Eighteen cases of granuloma inguinale are summarized by Fraser. Tartar emetic was employed in sixteen. Six healed completely. In ten cases, there was no benefit from the intravenous use of this drug. In one case, tartar emetic was not employed, and in another case the condition healed after administration of sulpharsphenamin. In no case was the rapid healing following the intravenous administration of tartar emetic reported by some workers observed.

Kentucky Medical Journal, Bowling Green

23: 55-140 (Feb.) 1925

Idiopathic Purpura Hemorrhagica: Case Cured by Splenectomy. M. Flexner, Louisville.—p. 56.
Simple Diarrhea in Infancy. W. J. Shelton, Mayfield.—p. 61.
Pyelitis; Its Recognition. V. Blythe, Paducah.—p. 64.
Renal Infections in Pregnancy. G. H. Day, Louisville.—p. 64.
Intestinal Obstruction from Gallstones: Case. L. Frank, Louisville.—p. 67.
Some Emergencies and Tragedies in Practice of Medicine. C. C. Howard, Glasgow.—p. 70.
Cholecystostomy or Cholecystectomy. L. W. Frank, Louisville.—p. 72.
Local Anesthesia. J. W. Stephenson, Ashland.—p. 76.
Sterility Successfully Treated by Endocrines: Six Cases. A. N. Pickett, Louisville.—p. 87.
Nervous Women. J. J. Moren, Louisville.—p. 90.
Diagnosis of Gallbladder Infection and Its Differentiation from Gastric and Duodenal Ulcers. F. W. Rankin, Lexington.—p. 97.
Gallbladder Shadows. C. D. Enfield, Louisville.—p. 100.
Action of Muscle Groups in Production of Deformity Resulting from Fractures. G. Sherrill, Louisville.—p. 107.
Open Method of Treatment of Fractures. H. Rivers, Paducah.—p. 111.
Treatment of Fractures of and About Joints. C. A. Vance, Lexington.—p. 112.
Treatment of Hip Fractures. J. M. Salmon, Ashland.—p. 114.
Indications and Methods of Inducing Abortion and Premature Labor. G. Fulton, Louisville.—p. 120.
Abuse of Forceps and Other Methods of Hastening Delivery. S. D. Breckinridge, Lexington.—p. 123.
Treatment of Eclampsia and Pre-Eclamptic Toxemia. H. M. Rubel, Louisville.—p. 127.
Present Status of Pituitary Extract in Obstetrics. W. Gossett, Louisville.—p. 131.

Laryngoscope, St. Louis

35:1-86 (Jan.) 1925

Acoustic Lacunae. D. W. Drury, Boston.—p. 1.
Chronic Progressive Deafness Treated with Galvanic Current. M. L. Harris, Brooklyn.—p. 9.
Supposed Novocain Poisoning. T. J. Harris, New York.—p. 14.
Squamous-Cell Carcinoma of Tonsil. M. Ross, New York.—p. 15.
Removal of Stenson's Duct from Right Antrum by Plastic Methods, Etc. J. E. Sheehan, New York.—p. 20.
Plastic Repair of Syphilitic Nose. J. E. Sheehan, New York.—p. 22.
Implantation of Stenson's Duct Into Antrum for Relief of Dry Fetid Catarrh, with Epitome of Operative Treatment of Ozena. J. E. Sheehan, New York.—p. 23.
Hemorrhage Following Ethmoid and Other Sinus Operations. S. Kulkin, New York.—p. 27.
Hemiplegia Following Submucous Resection of Septum. M. Rosenthal, New York.—p. 32.
Hodgkin's Disease of Nose. T. J. Harris, New York.—p. 34.
Hemorrhage Following Ethmoidectomy. S. Kulkin, New York.—p. 36.
Aspergosis: Two Cases Accompanying Chronic Sinusitis. M. Jones, New York.—p. 38.
Foreign Body in Nose. J. E. Sheehan, New York.—p. 42.
Ligation of Sphenopalatine Artery for Severe Hemorrhage Following Ethmo-Sphenoid Operation. S. L. Ruskin, New York.—p. 43.
Secondary Hemorrhage in Intranasal Surgery: Case. S. J. Selkin, New York.—p. 44.
Cervical Glands Secondary to Carcinoma of Esophagus: Case. J. Klepper, New York.—p. 46.
Cyst of Inferior Turbinate. M. Rosenthal, New York.—p. 49.
Bone and Cartilage of Tonsil; Persistent Bleeding Following Removal of One Tonsil. M. Reder, New York.—p. 50.
Double Ethmoiditis in Infant. J. J. Salerno, New York.—p. 52.
Carcinoma of Trachea. T. J. Harris and H. H. Forbes, New York.—p. 53.
Hemiangioma of Nose. M. Rosenthal, New York.—p. 54.
Phenol Burns of Left Eyelids, Eyeball, Upper Face and Temporal Area. J. E. Sheehan, New York.—p. 55.
Cerebellar Abscess of Otitic Origin. C. F. Yerger, Chicago.—p. 56.
Syphilis from Rhinological Standpoint. J. A. Babbitt, Philadelphia.—p. 60.
Syphilis in Relation to Nervous System. C. S. Potts, Philadelphia.—p. 65.
Acute Mastoiditis. M. N. Kleinert, Boston.—p. 73.
New Nasal Splint. F. W. White, New York.—p. 76.
New Laryngeal Syringe. D. R. Higbee, San Diego, Calif.—p. 77.
An Electrically Driven Nasal Saw and Rasp. S. Iglauer, Cincinnati.—p. 78.

Medical Journal and Record, New York

121:133-196 (Feb. 4) 1925

Cancer's Self Control. A. C. Broders, Rochester, Minn.—p. 133.
Precancerous Conditions About Rectum. A. A. Landsman, New York.—p. 135.
Influence of Pulmonary Tuberculosis on Evolution of Pregnancy and Offspring. C. G. Cunnison, Geneva, Switzerland.—p. 137.
Chronic Intestinal Stasis in Epilepsy. A. W. Robertson, Glasgow, Scotland.—p. 138. This article was published in the British Medical Journal, Dec. 27, 1924, and abstracted in THE JOURNAL 84:1551 (Feb. 14) 1925.
Pathologic Impulses or Currents. H. Byrd, Bradentown, Fla.—p. 141.
True Dermoid Cyst of Anterior Wall of Rectum. J. F. Saphir, New York.—p. 144.
Peritonsillar Abscess with Complicating Edema of Glottis. S. Stein, New York.—p. 147.
New Stopcock for Direct Blood Transfusion. A. A. Eggston and J. A. Moran, New York.—p. 148.
Venipuncture in Therapy. C. S. Danaher, Brooklyn.—p. 150.
Ectopia of Urinary Bladder in Infant. J. Eostein, New York.—p. 151.
Resistance of Tolerance of Gonococcus to Germicides in Relation to Antigonorrheal Therapy. T. V. Williamson, Norfolk, Va.—p. 153.
Natural History of Hyperthyroidism and Its Significance. J. Rogers, New York.—p. 157.
Etiology and Pathogenesis of Tertiary Syphilis of Thyroid Gland. P. Guillaume, Bordeaux, France.—p. 159.
Adenoma of Thyroid. R. R. Moolten, New York.—p. 160.
Absence of Endemic Goiter in Honolulu. J. C. O'Day, Honolulu, Hawaii.—p. 162.
Plea for Discontinuing Use of Pituitrin in Intrapartum Practice. D. Deutschman, New York.—p. 164.
Some Problems Which Endocrinology Presents. I. Pardee, New York.—p. 166.
Mildest and Earliest Cases of Diabetes Mellitus. A. Galambos, New York.—p. 170.
Desiccated Gonadal Substances. H. Sharlit and J. Samet, New York.—p. 171.

121:197-260 (Feb. 18) 1925

Syphilis of Anus and Rectum. C. J. Drueck, Chicago.—p. 197.
Possibility of Immunization of Tissues of Nose, Throat and Ear by Use of Vaccines Applied Locally. H. Hays, New York.—p. 205.
Trigeminal Neuralgia. F. C. Grant, Philadelphia.—p. 206.
Accidentally Removed Nasal Mucous Membrane Adheres and Functions When Replaced. E. V. Hubbard, New York.—p. 209.
Home Postgraduate Work by Means of Postmortem Examinations. W. W. Waite, El Paso, Texas.—p. 210.
Otitic Pyemia Without Sinus Thrombosis. J. C. Seal, New York.—p. 211.
Bone in Eye. P. Dunn, London.—p. 213.
Obstetric Paralysis: Case. M. Stromsky, New York.—p. 214.
Case of Spontaneous Pneumothorax in Young Boy. H. Apfel, Brooklyn.—p. 216.
Latent Chronic Empyema. M. A. Rabinowitz, Brooklyn.—p. 218.
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Treatment of So-Called Essential Arterial Hypertension. L. F. Barker, Baltimore.—p. 221.
Importance of High Blood Pressure. L. F. Bishop, New York.—p. 224.
Critique on Determination of Size of Normal Heart by Roentgenology. A. E. Pomier, New Orleans.—p. 227.
Transposition of Great Vessels of Heart with Atresia of Aortic Orifice. F. M. Johnson, Philadelphia.—p. 231.
Use of Diathermy in Cardiovascular Diseases. H. Lau, New York.—p. 232.
Vascular Disturbances. L. L. T. Broeck, Minneapolis.—p. 234.

Michigan State Medical Society Journal, Grand Rapids

24:77-144 (Feb.) 1925

Sterilization in Feebleminded. H. E. Randall, Flint.—p. 77.
*Hypothyroidism and Its Relationship to Chlorotic Anemia. L. M. Warfield and I. W. Greene, Ann Arbor.—p. 79.
Digitalis: Its Uses and Abuses. J. L. Chester, Detroit.—p. 82.
*Bismuth Salicylate as an Antisyphilitic Agent. A. E. Schiller, Detroit.—p. 86.
Report on a European Clinical Tour. E. I. Carr, Lansing.—p. 90.
*Kahn Precipitation Test for Syphilis. R. G. Owen and H. E. Cope, Detroit.—p. 94.
Modern Conceptions of Heart Disease. G. R. Herrmann, Ann Arbor.—p. 99.
*Phlorhizin Test in Early Diagnosis of Pregnancy. L. W. Haynes, Detroit.—p. 105.
*Surgical Treatment of Angina Pectoris. J. W. Vaughan, Detroit.—p. 108.
*Experimental Studies on Nature of Placental Extracts. C. L. A. Oden, Muskegon.—p. 110.

Low Basal Metabolism in Hypothyroidism.—The group of cases which Warfield and Greene have classified as chlorosis have, with one or two exceptions, shown some degree of lowered metabolic rate, which they believe to be due largely to hypothyroidism. Two cases showed quite definitely an association with hypothyroidism; in one case the association is quite questionable. Four cases of milder degrees of chlorotic anemia showed varying degrees of hypothyroidism. A rather definite chlorotic type of anemia occurred in a man with a lowered metabolic rate. Several cases showed rather definite improvement under thyroid therapy; two cases relapsed when thyroid extract was discontinued, and again showed improvement when it was resumed.

Bismuth Salicylate in Syphilis.—Schiller has administered bismuth salicylate intramuscularly, in 2 grain doses, in fifty-four cases of syphilis. His results lead him to say that it stands above mercury, but below arsphenamin in efficiency, as it is slower than arsphenamin in its action. The persistent use of bismuth alone over a prolonged period of time will aid in the cure of syphilis, but the combination of arsphenamin and bismuth will give quicker and better results. The slower and more prolonged action of bismuth helps protect the patient against the early development of neurosyphilis. In latent cases and early neurosyphilis it will act better than arsphenamin to check the spread of the disease.

Kahn Test in Syphilis.—From their experience to date, Owen and Cope would hesitate to place the same reliance on the Kahn method that they do on the Wassermann reaction except in the case of frankly negative or strongly positive reactions.

Phlorhizin Test in Diagnosis of Pregnancy.—In a series of fifty cases Haynes had thirty-six positive and fourteen negative reactions. In all of the fifty he has since been able to prove or disprove the accuracy of the result of the test. Forty-four of the reactions were correct, and six incorrect, making the percentage slightly over 13 per cent. incorrect, as compared with 12 per cent. of a larger number of cases reviewed in the literature. Besides these fifty cases of early pregnancy Haynes has tried the phlorhizin test in twelve pelvic inflammatory and fibroid cases. With these there was no regularity of results. There were three miscarriages, two giving negative reactions, and in both of these cases the membranes passed within a few hours. In the one positive reaction case, although the patient was flowing, the products of conception were not passed for several days.

Surgical Treatment of Angina Pectoris.—Vaughan relates a case of angina pectoris in which he performed an operation to the end of giving the patient relief from pain. The usual

incision was made along the posterior border of the sternocleidomastoid muscle. The great auricular nerve was laid bare for a distance of 2 inches, without other injury to that structure, while the spinal accessory nerve was exposed for a distance of 1½ inches. Coursing along the anterior surface of the longus capitis muscle, a nerve was encountered whose position accorded with that of the cervical sympathetic. However, on tracing upward and downward for a distance of 5 inches no ganglion or branching could be discovered. Nevertheless, when this nerve was injured by pinching with forceps the pulse rate immediately increased to a rate of 120 a minute. It was, therefore, thought that it must either be a sympathetic nerve, which did not possess the characteristic textbook description, or that the depressor nerve had been encountered after an extremely low vagus separation. A piece about 3 inches in length was excised from this nerve. For the first few days the patient complained of numbness in the shoulder and behind the ear, after which the pain in these areas became quite excruciating. This lasted over a period of about four weeks, after which sensation in these localities returned to normal. Evidently the stretching and exposure of the greater auricular and the accessory nerves was responsible for the discomfort during this period, and an approach along the anterior border of the muscle would minimize the handling of these tissues. In fact this route is advocated by Vaughan. In the case cited no definite ganglion was encountered, and yet all afferent impulses from the pathologic field were evidently severed by a simple resection of 3 inches of the nerve.

Nature of Placental Extracts.—Oden sketches the results of sixty-two experiments done by him to clear up most points on the "placental theory" of eclampsia. He asserts that these experiments prove that placental extract contains one or more toxic substances which, when injected intravenously into animals, cause quick death with convulsions, respiratory paralysis and rapid coagulation of the blood, phenomena closely resembling those found in eclampsia. Repeated subcutaneous injections of large doses cause death in from twelve to thirty-six hours, with a train of rather indefinite symptoms. The exact nature of the toxin or toxins has not been determined. That it does not act mechanically, as claimed by Lichtenstein and recently currently accepted, has been demonstrated by positive results from injection of the perfectly clear supernatant fluid of centrifugalized Buchner press juice. That it is not of a simple chemical nature is proved by the fact that it is neutralized by homologous serum. Furthermore, it has been shown that the neutralizing power of the serum is not of a "complement-binding" nature by the demonstration that filtration of the serum destroys its neutralizing power.

New Jersey Medical Society Journal, Orange

22: 33-74 (Feb.) 1925

Health Examinations. B. L. Bryant, Bangor, Me.—p. 33.
Recent Development with Regard to Chlorin Treatment of Certain Respiratory Diseases. E. B. Vedder.—p. 40.
Mortality Experience of New Jersey Medical Society. P. C. H. Pappe and C. D. Bennett.—p. 47.
Observations on Foreign Bodies in Air and Food Passages. G. Tucker, Hackensack.—p. 53.
Treatment of Cicatricial Stenosis of Esophagus by Continuous String Retrograde Dilatation with Author's Bougie. G. Tucker, Hackensack.—p. 56.

New York State Journal of Medicine, New York

25: 195-246 (Feb. 13) 1925

Review of Four Years' Work with Radium in Gynecology. T. P. Farmer, Syracuse, N. Y.—p. 195.
Some Neglected Phases of Coma in Diabetes Mellitus. W. S. McCann, Rochester.—p. 200.
One Hundred and One Cases of Nasal Infection, Exclusive of Diphtheria, in Children. W. A. Krieger, Poughkeepsie.—p. 203.
Endemic Goiter as Public Health Problem. O. P. Kimball, Cleveland.—p. 207.
Physician and Compensation Law. A. E. Man, New York.—p. 210.

Northwest Medicine, Seattle

24: 51-104 (Feb.) 1925

Relation of Dental Infections to Health and Disease. W. A. Price, Cleveland.—p. 51.
Constancy of Fixed Symptoms with Bony Abnormalities of Lumbosacral Spine. E. A. Rich, Tacoma, Wash.—p. 56.
Idiopathic Genital Gangrene Case. H. A. Castle, Pocatello, Idaho.—p. 61.
Epispadias in Male. T. F. Mullen, Pocatello, Idaho.—p. 63.
Diseases of Prostate and Their Treatment, Medical and Surgical. M. B. Wesson, San Francisco.—p. 66.
Thoracic Tuberculous Adenitis. E. A. Pierce, Portland, Ore.—p. 71.
New Ideas Regarding Epilepsy and Its Cure. R. B. Tracy, Butte, Mont.—p. 75.
Renal Diabetes. C. H. Hofrichter, Seattle.—p. 79.
Gaucher's Disease. L. Rice, Portland, Ore.—p. 81.
Maxillary Sinus Operation. R. W. Perry, Seattle.—p. 83.

Oklahoma State Medical Association Journal, Muskogee

18: 24-47 (Feb.) 1925

Relation of Appendicitis to Pelvic Conditions. A. S. Risser, Blackwell.—p. 24.
Review of One Hundred Consecutive Operations on Gallbladder. M. Rogers, Clinton.—p. 28.
"Extra-Uterine Pregnancy." A. J. Sands, Oklahoma City.—p. 30.
Significance of Blood Flowing from Anus. J. W. Nieweg, Duncan.—p. 33.
Nonspecific Conditions of Posterior Urethra with Special Reference to Referred and Nervous Symptoms. W. J. Wallace and E. Moore, Oklahoma City.—p. 35.

Philippine Islands Medical Association Journal, Manila

4: 405-444 (Nov.) 1924

Ureteral Calculus. M. N. Tuason.—p. 405.
Death After Injection of Arsphenamin. S. de Los Angeles.—p. 416.
Ankylostominsis. I. Laboratory Diagnosis of Hookworm Infection. C. Manalang.—p. 421.

Tennessee State Medical Association Journal, Nashville

17: 277-303 (Jan.) 1925

Splenectomy: Case. B. Malone, Memphis.—p. 277.
Congenital Pyloric Stenosis. R. A. Barr, Nashville.—p. 280.
Wounds of Thorax. M. B. Davis, Nashville.—p. 284.
Statistical Report of Gallbladder Disease at St. Thomas Hospital. H. D. Peters, Nashville.—p. 287.
Acute Sinusitis. W. W. Wilkerson, Nashville.—p. 289.

Wisconsin Medical Journal, Milwaukee

23: 477-537 (Feb.) 1925

Future Progress of Medicine and Its Relation to Natural Sciences in University. C. K. Edmunds, Baltimore.—p. 477.
Colloidal Gold Reaction in Syphilis of Central Nervous System. M. O. Howard, Wauwatosa.—p. 483.
*Relation of Ureteral Strictures to Renal Calculi. W. G. Sexton, Marshfield.—p. 484.
*Prophylactic Blood Transfusion as Routine Measure in Poor Operative Risks. G. G. Ward, New York.—p. 489.
Micro-Folin-Wu Method of Quantitative Blood Sugar Estimation, Using 0.1 C.c. of Blood. T. L. Byrd, Milwaukee.—p. 492.

Relation of Ureteral Strictures to Renal Calculi.—Sexton cites five cases to show that strictures of the ureter do occur in association with renal calculi, and that thorough dilation of the ureter prevents reformation of calculi. The literature indicates that calculus formation is initiated in the presence of stagnation, concentration and infection, all three conditions being found in stricture, and the stricture of the ureter may play an important rôle. Being certain that there is no ureteral obstruction lessens the possibility of the formation of a urinary fistula. In view of these facts no one is justified in operating for calculi without knowledge of the condition of the ureter.

Prophylactic Routine Blood Transfusion.—Ward urges that blood transfusion should be employed as a routine prophylactic measure before operation much more frequently than is the present practice, especially in gynecologic cases. In a large proportion of cases 500 c.c. of blood is sufficient for a prophylactic transfusion, and this amount is not sufficient to cause the donor distress. The amount of blood lost in many gynecologic operations is not always appreciated by the operator and is a factor that should be considered when patients have a lowered blood state. While posttransfusion reactions occur in about 25 per cent. of cases, they are usually not of a serious type, provided that the donor's and recipient's blood have been matched directly, and that they do not appear to mitigate the benefits of the transfusion. Adoption of this procedure will result in an appreciable improvement in mortality and morbidity statistics.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Brain, London

97: 499-532 (Dec.) 1924

Inhibition. E. D. Adrian.—p. 399.
Pathology of Echographia. A. Pick.—p. 417.
Oligodendroglia: Relation to Classical Neuroglia. W. Penfield.—p. 430.
Encephalitis Periaxialis Diffusa. L. Bauman.—p. 453.
Encephalitis Periaxialis of Schilder. J. Collier and J. G. Greenfield.—p. 489.

British Journal of Dermatology and Syphilis, London

37: 63-112 (Feb.) 1925

Generalized Eruption Caused by Microsporon Audouini, Lichen Microsporicus. C. W. Pinnerud.—p. 63.
Syphilitic Gangrene of Fingers. Case. J. Ormerod.—p. 84.
*Melanosis After Arsenobenzol. W. J. O'Donovan.—p. 87.

Melanosis After Arsphenamin.—A case is reported by O'Donovan of grave and persistent melanosis occurring after eleven doses of neo-arsphenamin that closely similates the described cases of arsenical melanosis of the prearsphenamin period.

British Journal of Experimental Pathology, London

6: 1-40 (Feb.) 1925

Physiologic Action of Colloids. I. Blood Elements and Antibody Content. D. B. Stubbert.—p. 1.
Rotary Nomogram for Use in Calculation of Diabetic and Other Diets. W. A. M. Smart.—p. 14.
Etiology of Experimental Keratomalacia. G. M. Findlay.—p. 16.
Sex Glands and Metabolism. I. Influence of Castration on Nitrogen and Gaseous Metabolism. V. Korenchevsky.—p. 21.
Structures Which Develop in Certain Culture Mediums and Resemble Colonies of Micro-Organisms. P. P. Laidlaw.—p. 36.

British Journal of Ophthalmology, London

9: 97-144 (March) 1925

Tints and Their Value. A. Lawson.—p. 97.
Lateral Ocular Muscle Balance in School Children; Squint in Myopia. E. Thomson.—p. 109.

British Medical Journal, London

1: 343-392 (Feb. 21) 1925

*Possibilities of Exploratory Thoracotomy. G. E. Gask.—p. 343.
Pathology and Treatment of Genu Valgum. C. A. Morton.—p. 346.
Sympathetic Innervation of Striated Muscle. J. I. Hunter.—p. 350.
*Brain Abscess of Aural Origin. C. Yorke.—p. 354.
Folliculitis Capitis Pulminans. S. W. Smith.—p. 355.
Volvulus of Small Intestine. J. W. G. Grant.—p. 355.

Exploratory Thoracotomy.—On the basis of what has actually been accomplished in this field, Gask thinks it may fairly be considered as proved that certain types of injury and disease of the thoracic viscera may be treated well and successfully by open operation; that the method adopted is a sound one; that it gives encouraging results, and that it is worthy of general consideration. It has also been demonstrated that the chest can be opened under general anesthesia, and that the operative technic, though by no means insusceptible of improvement, is so far advanced as to justify the belief that with increased experience still further developments may be hoped for in the near future.

Brain Abscess of Aural Origin.—Six cases are reported by Yorke. Three patients have recovered completely, one died of a recurrence three months after operation, and two died of a recurrence without the abscess being found at operation. These cases illustrate that localizing signs are frequently absent in brain abscess, and that, for this reason, it is often difficult to know whether the cerebrum or cerebellum is affected. With left temporosphenoidal abscess word deafness is usually present, but, if the disease is well advanced, the general hebetude will make it impossible to test for sensory aphasia. Crossed hemiparesis and homolateral oculomotor paresis are, in Yorke's opinion, rarely present in temporosphenoidal abscess. In cerebellar abscess, nystagmus and some form of ocular paresis are the most frequent localizing signs; but even these are often absent, as also are asynergia and homolateral paresis. In Yorke's experience, the most significant symptom of acute brain abscess is severe pain in the head, which is subject to the most terrible exacerbations. This is an early symptom and is invariably present. It continues until a dull apathetic state ensues, which is the precursor of coma.

1: 393-436 (Feb. 28) 1925

*Some Aspects of Cholelithiasis. B. Moynihan.—p. 393.
Sympathetic Innervation of Striated Muscle. J. I. Hunter.—p. 398.
*Early Diagnosis and Treatment of Pyloric Stenosis in Infants. H. T. Ashby and A. H. Southam.—p. 403.
*New Tuberculin. A. Lundie.—p. 405.
*Pleural Reflex Associated with Fracture of Twelfth Rib. G. M. Wauchope.—p. 406.
Arsenical Poisoning Treated by Sodium Thiosulphate. H. M. Halliday and C. E. Sutherland.—p. 407.
Malignant Cervical Adenitis Simulating Aneurysm. T. Lindsay.—p. 407.
Immunity, Specificity and Nonspecific Factors. J. E. Bulloch.—p. 407.

Cholesterol Values in Cholelithiasis.—Moynihan emphasizes the fact that the diagnostic significance of an increased cholesterol content of the blood in cholelithiasis is important. Over 75 per cent. of patients in whom hypercholesterolemia was found were suffering from cholelithiasis. The blood examined after operation shows that after all operations of magnitude there is a fall in the cholesterol content. This fall is followed slowly, as a rule, by a rise which may carry the content up to or beyond the normal. A condition of hypercholesterolemia may then persist unless measures are taken to reduce the accumulation of cholesterol. To this end a careful supervision of the dietary is necessary.

Surgical Treatment of Pyloric Stenosis.—Ashby and Southam urge that once this condition has been recognized surgical aid should be sought at the earliest possible moment, for in operation lies the quickest and most certain chance of success. After surgical treatment the infant usually shows rapid improvement and within a few weeks is frequently able to be discharged as cured. Medical treatment, on the other hand, may require months of careful attention, and the ultimate result is often uncertain. If recovery takes place after operation it appears to be permanent; in fact, the majority of those who recovered after operation in infancy are in later life a good deal above the normal weight for age.

New Tuberculin.—Lundie extracts the acid-fast material from the tubercle bacillus with phosphorus trichlorid. The end of the reaction is a firm pasty mass, which can be liquefied by the addition of water. All the bacilli can be precipitated along with the phosphorized fats by the addition of acetone. This precipitate is the basis of the tuberculin described. Its antigenic action is feeble, but is much enhanced by cholesterin.

Pleural Reflex Associated with Rib Fracture.—In Wauchope's case the twelfth rib was fractured about midway between its junction with the vertebrae and the abrasion. Strapping was applied, and the patient remained in bed, experiencing, for the first few days, considerable discomfort and pain even on slight movement. Four days after the accident she had an attack of hiccup lasting for some hours; both before and after this she had an occasional single hiccup. Progress was otherwise uneventful. Two weeks later, when out of bed, she stooped for something and was suddenly conscious of a feeling of faintness, breathlessness and palpitation, accompanied by severe pain in the upper part of the sternum. She felt very ill and thought she was going to die. There were no physical signs in the chest and no pain at the site of fracture. After this, improvement was steady. Wauchope thinks it probable that the sudden movement of stooping irritated the nerves of the pleura, either by tearing an adhesion or by friction, and so gave rise to pleural reflex of the vasomotor type.

Glasgow Medical Journal

103: 73-143 (Feb.) 1925

Rheumatoid Arthritis. R. Steelman.—p. 75.
*Id. Nonspecific Therapy. D. Campbell.—p. 79.
Id. Surgical Aspects. J. Russell.—p. 90.
*Pathologic Evidence Bearing on Disease Incidence in Calcutta. L. Rogers.—p. 95.
Hodgkin's Disease with Paraplegia: Case. G. A. Allan.—p. 115.

Nonspecific Therapy in Rheumatoid Arthritis.—Campbell uses typhoid vaccine in these cases. Of the fifty-eight cases in which improvement was obtained under treatment, forty patients had been able to perform all their ordinary duties

for periods varying from one to three and a half years, and there had been no exacerbation of the joint condition, nor spread of the disease to other joints. Two patients could not be traced, and in the remaining sixteen, relapse was known to have taken place. All these sixteen cases had reached a fairly advanced stage before they came under treatment. Among them were several who showed so much improvement after two or three injections that no further treatment was given.

Incidence of Malignant Tumors in Bengal.—On the whole, Rogers says, malignant tumors, including both connective tissue and epithelial types, are about equally common in Bengal and England, with a slight excess in the tropical country. Both innocent and malignant connective tissue tumors are considerably more common in Bengal than in England, while the reverse is the case with both innocent and malignant epithelial tumors. The slightly lower incidence in Bengal of the malignant epithelial tumors of carcinomas is fully explained by the age factor, as the higher rate in London is more than accounted for by the great excess of persons of the cancer age (over 40 or 50 years) in England, as compared with Bengal. Cancers of the tongue, esophagus, stomach, large intestine and breast show considerable excess in the London pathologic examinations, while those of the skin, penis, both the cervix and body of the uterus, liver and gallbladder are in excess in India. Nearly all of these data are explainable on the known laws of long continued irritation and of the importance of such irritation as the predisposing or exciting cause of cancer. The threefold excess of cancer of the uterus in Bengal is probably related to early menstruation, childbearing and menopause in the Bengali race leading to earlier and more frequent development of cancer in them as compared with European females.

Japan Medical World, Tokyo

5: 1-22 (Jan. 15) 1925

*Etiology of Measles. S. Kusama, T. Yokoyama and N. Ito.—p. 1.
Physiologic Significance of Biosterin (So-Called Vitamin A). K. Takahashi and J. Nakamiya.—p. 2.
*Animal Parasites in Korea. H. Kobayashi.—p. 9.

Etiology of Measles.—Kusama, Yokoyama and Ito have succeeded in obtaining a micro-organism that has a specific morphologic appearance and bears a close resemblance to that of the typhus micro-organism. The former differs from the latter in that it is an anaerobic organism. It had also certain cultural and immunologic characteristics. However, the authors do not regard this micro-organism as the causative agent of measles.

Animal Parasites in Korea.—*Paragonimus westermanii, Taenia saginata* and *Ascaris lumbricoides* are most important as well as common parasites all over the Chorean peninsula. *Clonorchis sinensis,* hookworm and *Trichuris trichiura* are prevalent in the southern part, and clonorchiasis occurs often endemically. Hookworm and *Trichuris trichiura* diminish in the northern part. *Metagonimus yokogawai, Trichostrongylus orientalis* and *Strongyloides stercoralis* occur not rarely. *Sparganum mansoni* infests lower animals commonly, and a few human cases are also reported. *Endamoeba histolytica* and *Plasmodium vivax* seem to occur commonly, though a general survey is wanting. Intestinal myiasis may not be rare.

Journal of Laryngology and Otology, Edinburgh

60: 145-212 (March) 1925

Cartilaginous Tumors of Larynx. I. Moore.—p. 145.
Osseous Growths of Nasal and Adjacent Bones. W. H. Kelson.—p. 165.
Is Chronic Maxillary Sinusitis the Cause of Bronchiectasis? J. Adam.—p. 172.
Obliteration of Tympanic Antrum in Radical Operation. E. W. Gutteridge.—p. 174.
Intralabyrinthine Pressure Balance. F. P. Sturm.—p. 178.

Journal of Tropical Medicine and Hygiene, London

28: 85-100 (Feb. 16) 1925

Influence of Climate and Malaria on Yaws. G. C. Ramsay.—p. 85.
*Treatment of Hemoglobinuric Fever with Caffein Sodiobenzoate. A. A. Facio and M. D. Rojas.—p. 86.
Etiology of Blackwater Fever. W. M. Heweston.—p. 88.

Treatment of Hemoglobinuric Fever with Caffein Sodiobenzoate.—Twelve cases of hemoglobinuria fever, five of them true blackwater fever cases and the remaining seven probably cases of quinin hemoglobinuria, are reported by Facio and Rojas as having been cured by the use of caffein sodiobenzoate, injected subcutaneously, in solutions varying in strength from 0.001 gm. to 0.020 gm. of the drug to each cubic centimeter of sodium chlorid solution. Medium hemolysis resulted with doses up to 0.005 gm. No hemolysis was apparent with doses from 0.009 gm. upward.

Lancet, London

2: 369-420 (Feb. 21) 1925

John Hunter as a Man. D'Arcy Power.—p. 369.
*Diagnosis of Unilateral Phrenic Nerve Paralysis. C. Briscoe.—p. 376.
*Case of Parenteric Fever Caused by B. Columbensis Castellani. H. N. C. Van G. Kelaart.—p. 381.
*Effect of Antiserum on Cancer Cells in Vitro. T. Lumsden.—p. 383.
*Unusual Case of Diabetic Coma. G. J. Langley.—p. 384.

Unilateral Phrenic Nerve Paralysis.—A syndrome, recognizable clinically, is described by Briscoe, the signs of which are due partly to defective action of one-half of the diaphragm, and partly to the resultant incomplete expansion of the lungs. In this series of cases the causal factor has been pressure on the phrenic nerve of one side. This syndrome is important as assisting in the diagnosis and localization of intrathoracic lesions.

Parenteric Fever Caused by Bacillus Columbensis.—Kelaart reports the case of a patient who developed a fever which lasted approximately three weeks. All the serologic reactions for typhoid and parathyphoid were constantly negative as well as the bacteriologic examination of the stools for the same germs. Instead the blood showed marked agglutination (1:160) for *B. columbensis,* which has gradually decreased since the fever ceased. From the stools a bacillus was grown with the characteristics of *B. columbensis;* it was well agglutinated by the patient's blood in slightly higher dilution than the laboratory strains. In Kelaart's opinion, the case described is in all probability a case of "parenteric fever" due to *B. columbensis* Castellani. This type of parenteric is also known as "febris columbensis."

Effect of Antiserum on Cancer Cells.—A mouse mammary carcinoma (M 63 of the Imperial Cancer Research Laboratory) was dissected out carefully, with rigid aseptic precautions, washed in physiologic sodium chlorid solution and finely divided with scissors. Of this 0.1 c.c. was inoculated subcutaneously into two rats. Tumors appeared and grew for from ten to twelve days and were then reabsorbed. Thereafter, 1 c.c. of similar tumor material was injected into the peritoneal cavity of each rat, weekly for eight weeks. Seven days after the last injection in Rat 1, and three days after that in Rat 2, the serum of the rats was collected and stored in sealed capillary tubes made of "resistance" glass. An antirat cancer serum was similarly made from two rabbits. Cancer cells, various normal tissues from young animals, and both of these together were then cultivated in the antiserums, with controls in normal rat or rabbit serum. The number of experiments is small but the results in more than 100 cultures in serums from two rats and two rabbits have been constant and positive. No instance was seen in which the antigenic tumor cells survived. In ten cases a few cells migrated out, but these succumbed after refeeding with the antiserum. In the symbiotic antiserum culture, heart muscle grew normally and beat for from two to three days; in one case for six days. Kidney and spleen survived but grew somewhat less vigorously than in normal rat serum. In all the controls, both cancer and normal tissue survived and grew well. Lumsden concludes that antibodies more or less specific to cancer can be produced by repeated inoculation into an animal of another species. Apart from this serum, all other agencies tried (heat, cold, radium, ultraviolet rays, bacterial infection) cause the death of normal tissues in vitro before that of cancer cells.

Large Doses of Insulin in Diabetic Coma.—Langley gave his patient 100 units of insulin the first day, 260 the second day, 190 the third day, 120 the fourth day, 134 the fifth day, 215 the sixth day and 150 the seventh day. The air hunger

was materially reduced in severity after twelve hours of treatment, but persisted in easily recognizable form for thirty-six hours. After its disappearance, coma still remained and showed no signs of reduction in degree. Sodium bicarbonate was given by mouth throughout, but never in any larger dose than one dram (4 gm.) at a time. It is suggested that a factor which was overlooked in the treatment is possibly a very potent one, namely, the available phosphates. It is possible that had phosphates been given freely, a much more rapid recovery of consciousness would have taken place. Some support to such a view is given by the fact that after recovery the tongue remained for several days thickly coated with a brown fur, which did not clean in spite of the administration of much sodium bicarbonate and constant attention to the buccal toilet; it, however, cleaned completely in twenty-four hours on the addition of 15 gm. doses of sodium phosphate to the diet. It is remarkable that although coma developed to the degree of incontinence, yet throughout the patient took fluids freely and easily.

1: 421-474 (Feb. 28) 1925

Wounds and Other Injuries in Their Medicolegal Aspect. B. H. Spilsbury.—p. 421.
Rupture and Avulsion of Uterus at Time of Labor. H. R. Spencer.—p. 425.
*Cancer and Heredity. P. Lockhart-Mummery.—p. 427.
*Oral Administration of Large Quantities of Glucose. T. L. Bennett and E. C. Dodds.—p. 429.
Dislocation of Semilunar Bone: Case. C. Noon.—p. 432.
Meningitis Following Lumbar Puncture: Irrigation; Recovery. C. P. Symonds.—p. 434.
Acquired Acholuric Jaundice: Case. C. E. K. Herapath.—p. 435.

Cancer and Heredity.—Three cases cited by Lockhart-Mummery are said to prove that adenomatosis of the large bowel is a condition which tends to develop in succeeding generations in the same family. One patient, aged 31, had a vast number of simple adenomatous polypi throughout the visible part of the rectum and colon. The patient is one of a family of four, and on her mother's side had nine uncles and aunts. Seven of these and her mother have died of cancer of the bowel at between 30 and 54, and her maternal grandfather also died of cancer of the bowel. The second patient had an extreme degree of multiple adenomatosis of the entire large bowel. The brother of this patient was treated for multiple adenomata of the rectum and colon in 1913, and died from cancer of the rectum in 1919, at the age of 36. The patient's father died from cancer of the sigmoid flexure, and several of his brothers and sisters are said to have died from cancer of the bowel. Both the grandfather and grandmother are said to have died from cancer of the bowel. The third patient had multiple adenomatosis of the large bowel. Her brother also has multiple adenomatosis. This patient's father died from cancer of the rectum in 1922, at the age of 46. The grandfather's brother died of cancer of the rectum, and the grandfather on the mother's side died of cancer of the throat at the age of 50.

Administration of Glucose in Acute Infections.—Large quantities of glucose have been added by Bennett and Dodds to the diet as a therapeutic measure in many clinical cases, particularly in acute infections, and cases with marked undernutrition. Distinct benefit appears to have resulted, and no ill effects have been observed. In some of these cases the glucose administration was accompanied by small doses of insulin.

Archives de Médecine des Enfants, Paris

28: 73-136 (Feb.) 1925

*Oculocardiac Reflex in Infants. M. Zalewski.—p. 73.
*Whooping Cough. C. Funck-Hellet.—p. 94.
Hypertrophic Cirrhosis and Hypersplenomegaly with Pericarditis. Carrieu and Janbon.—p. 104.
Syphilitic Meningo-Encephalitis Resembling General Paralysis. P. Bézy and Rizer.—p. 109.
Vaccination Against Diphtheria. J. Comby.—p. 115.

Oculocardiac Reflex in Infants.—Zalewski concludes that the oculocardiac phenomenon is a physiologic reflex in infants, absent in the new-born, and faint in the first week of life. The exaggerated reflex appears most often in infants with a neuropathic constitution. In various affections of children, the oculocardiac reflex is a definite method of clinical diagnosis, an index of the tonus of the pneumogastric and the condition of its centers.

Incubation Period, Transmission and Prevention of Whooping Cough.—Basing his conclusion on study of seven epidemics in a children's asylum, Funck-Hellet finds that the period of incubation is from nine to eleven days. The first case is transmitted by some "accidental" carrier, one of the weekly visitors. The epidemic develops partly from this newly infected child, and partly from the children with a history of whooping cough who are regarded as protected and harmless, and are not isolated. They, as healthy carriers for the time being, spread the germs from the first days. When the first case of whooping cough is recognized, the child should be isolated and the children who have had whooping cough should be segregated. Prompt bacteriologic examination of all that cough, including this group, is the only means for early diagnosis. This will allow the use of convalescents' serum or vaccine in time to ward off or at least to mitigate the disease. Arrangements should be made for prompt expert bacteriologic examination of the sputum at some central point.

Bulletin de l'Académie de Médecine, Paris

93: 181-199 (Feb. 17) 1925

Microbicidal Properties of Waters. F. Arloing et al.—p. 184.
*Rôle of Tuber Cinereum. C. I. Urechia and I. Nitescu.—p. 188.
Tardy Syphilitic Meningitis. Long.—p. 194.
*Cerebrospinal Fluid in Ictorogenic Spirochetosis. A. Pettit.—p. 197.

Rôle of the Periventricular Nucleus of the Tuber Cinereum.—Urechia and Nitescu found a degenerated periventricular nucleus of the tuber cinereum in four pancreatectomized dogs. This fact may confirm the connection of the pancreas with the vegetative center of the tuber; also the significance of the periventricular nucleus in sugar metabolism. The diabetic hypothermia and a pronounced alteration of the periventricular nucleus also in a case of frost-bite suggest, they say, that this nucleus may play an important part in production of the body heat.

Agglutinins in Cerebrospinal Fluid in Weil's Disease.—Pettit noted slight quantities of agglutinins for *Spirochaeta icterohemorrhagiae* in the cerebrospinal fluid of three patients with infectious jaundice.

Bulletin Médical, Paris

39: 165-190 (Feb. 14) 1925

*Hypertension in Children. J. Génévrier.—p. 169.
*Hepatic Colic from Protein Shock. Parturier.—p. 171.

Arterial Hypertension in Children, Due to Congenital Syphilis.—Génévrier says that congenital syphilis may cause the hypertension without renal or cardiovascular abnormalities. It becomes manifest about the eighth or tenth year, with impairment of the general health, anemia and retarded development. He has used mercury, arsenic, and bismuth, alone or together, always without reduction of the tension, but with notable improvement in the general condition. Hygienic and dietetic regulations appear most effective in warding off any aggravation of the syndrome. Iodids are recommended. He hopes by this combination treatment of the child to prevent grave cardiac disturbance in the young adult.

Hepatic Colic from Protein Shock.—Parturier presents a series of cases of liver colic following horse serum injections, autohemotherapy, or accidental passage of venous blood into the tissues. From these observations and study of the blood in cholecystitis, he attributes certain cases of hepatic colic to protein shock. With definite leukopenia and change in coagulation, a protein shock is unmistakable. In this group, recurrence should be prevented by desensitization (peptone, beef juice), while the spasm and local pain are treated by the application of heat.

Bulletins de la Société Médicale des Hôpitaux, Paris

49: 221-244 (Feb. 13) 1925

*"Varicella and Zoster." Lesné and de Gennes.—p. 221.
Phrenicotomy in Bronchiectasis. A. Chauffard and A. Ravica.—p. 224.
*Congenital Chorea. L. Babonneix and M. Lévy.—p. 229.
Accidental Ingestion of Gasoline. R. Le Clerc.—p. 232.
*Asthma with Exophthalmic Goiter. D. Danielopolu.—p. 234.
*Suprarenal Insufficiency in Congenital Syphilis. Pautrier.—p. 240.

"Chickenpox and Zoster."—Lesné and de Gennes present arguments to prove that chickenpox and herpes zoster are different affections. While chickenpox is a frequent disease in children, zoster occurs only rarely in them. The eruption in chickenpox is generalized, in zoster it is localized. Relapses never occur in varicella, but the disease does not confer immunity against zoster. Many adults with zoster had varicella in childhood. One boy had both diseases at an interval of several years. Leukopenia and mononucleosis exist in chickenpox, but are absent in zoster. The cerebrospinal fluid is normal in varicella, while the lymphocyte reaction is constant in zoster, and the latter cannot be transmitted by inoculation. Inoculation with virus from chickenpox is followed eight to twelve days later by a characteristic eruption at least in one out of every two cases. The inoculation is positive even in children with zoster.

Congenital Chorea.—Babonneix and Lévy describe a case of life-long chorea in a man, aged 51. They suggest that the lesion may be located in the corpus striatum, and result from some anomaly in development. Or the lesion may be of inflammatory nature, analogous to those in infantile encephalopathies.

Exophthalmic Goiter with Asthma.—Danielopolu emphasizes that the syndrome of exophthalmic goiter is not induced exclusively by sympathicotonia. The vegetative hypertonia involves not only the sympathetic, but also the parasympathetic. Atropin tests show exaggerated tonus in the parasympathetic as well as in the sympathetic. The excessive tonus in the two antagonistic nerve systems explains the coincidence of asthma with exophthalmic goiter in a case described, the hypertonus in the parasympathetic nerves in the bronchial muscles coexisting with some local factor, such as local sclerosis, or local anaphylaxis. With general amphotonia, the parasympathetic evidently predominates in the bronchi.

Suprarenal Insufficiency in Congenital Syphilis.—Pautrier refers to two cases of congenital syphilis with signs of suprarenal deficiency. The possibility of a uniglandular disturbance in syphilis should be borne in mind, since early specific treatment, combined with the special organotherapy, might transform the case.

Comptes Rendus de la Société de Biologie, Paris

92: 313-404 (Feb. 13) 1925. Partial Index

Resorption of Organisms Placed in Peritoneum. M. Doyon.—p. 315.
Action of Pectin on Blood Coagulation. R. Feissly.—p. 317.
Stability of Fibrinogen. R. Feissly.—p. 319.
Epinephrin in Suprarenal Veins. E. Gley and A. Quinquaud.—p. 320.
Atypical Forms of the Gonococcus. Le Soudier and J. Verge.—p. 323.
Rôle of Lymphatic System in Lactation. E. Apostoleano.—p. 326.
Comparative Value of Conglutination Reaction. Brocq-Rousseu et al.—p. 326.
Structure of Urate Concretions in Gout. Achard and Feuillié.—p. 328.
Sensibility of Aerobes to Radium. Lacassagne and Paulin.—p. 333.
Rest Attitude in Man. Delcourt-Bernard and A. Mayer.—p. 334.
*Toxin-Extinction in Scarlet Fever. C. Zoeller.—p. 337.
*Acid-Base Balance in Menstruation. R. Weismann-Netter.—p. 339.
Resistance to Streptococcus in Pregnancy and Childbirth. Lévy-Solal et al.—p. 343.
*Caterpillars for Laboratory Research. E. Iwanow.—p. 345.
*Metabolism in Experimental Tuberculosis. A. Fontan.—p. 351.
*Physiology of Ocular Tension. Bonnefon.—p. 354.
Law of Surface Area in Metabolism. J. Giaja.—p. 364.
*Test for Lactic Acid in Blood. J. Collazo and J. Supniewski.—p. 367.
Culture of Tuberculous Virus from Pleural Effusion. Karwacki.—p. 374.
*Abnormal Innervation in Arm. A. J. Bant.—p. 377.
*Action of Roentgen Rays on Zymogens. F. Kmietowicz and J. Tumidajski.—p. 380.
Estimation of Blood Velocity in Arteries. Klisiecki.—p. 383.
*Form of Glucose in Human Blood. Lundsgaard and Holboell.—p. 387.
*Phenolsulphthonephthalein Test. C. Lundsgaard and E. Moeller.—p. 390.
*Transformation of Sarcoma Cells. A. Fischer.—p. 392.
Form of Glucose in Blood of Diabetics. Lundsgaard and Holboell.—p. 395.
Form of Glucose in Human Fluids. Lundsgaard and Holboell.—p. 398.
Resistance of Tubercle Bacillus to Heat. J. L. Orrskov.—p. 400.

Phenomenon of "Toxin-Extinction" in Scarlet Fever.—Zoeller tried the Dick test in three patients with scarlet fever, making the injections in an area covered with the rash. An injection of 0.3 c.c. of the Dick toxin induced a characteristic reaction, presenting the next day a deep red, not attenuated by the rash. The reaction was still visible a day later, but the third day the red had been replaced by a patch of blanching, occupying the exact area that had been involved in the skin reaction. Evidently the streptococcus toxin induced a localized extinction of the scarlatinal rash. He calls this phenomenon toxin-extinction in opposition to the Schultz-Charlton blanching, which is a serum-extinction process. The phenomenon was manifest in one patient, injected the first day of the eruption. It did not appear in two patients injected the third day of the disease. An analogy exists with the fact observed by Zingher in two subjects, given the Dick test eight days before the disease: the rash spared the region injected. A positive anatoxin reaction in one of these three patients did not induce any blanching in the area of the reaction. Zoeller considers the toxin-extinction as a local immunity, inducing a local cure. This precedes by two or three days the disappearance of the eruption. The facts observed, he says, suggest a trial of streptococcus toxin or anatoxin in treatment of scarlet fever, in so far as the disappearance of the eruption implies the cure of the disease.

Acid-Base Balance in Menstruation.—Weismann-Netter found in fifteen healthy women a progressive reduction of the alkali reserve in the premenstrual stage. The decrease, starting at least seven days before the menses, reached its lowest point the eve of the menses; then the alkali reserve began to rise. In two of eleven women subject to migraine, a condition of alkalosis was evident several hours before an attack of migraine. This fact apparently contradicts the anaphylaxis factor in the etiology of certain cases of migraine.

Preservation of Trypanosomes in Caterpillars.—Iwanow's experiments demonstrated that caterpillars may be utilized, instead of mice and guinea-pigs, for preservation of trypanosomes. The great advantage of the caterpillars in laboratory research is that they can be so easily transported.

Respiratory Metabolism in Tuberculosis in Guinea-Pigs.—Fontan reports that during the first stage of experimental tuberculous infection the respiratory quotient was about normal in the guinea-pigs. In the second and terminal stage the respiratory quotient rose considerably.

Physiology of Ocular Tension.—Bonnefon concludes from his experiments on rabbits that the secretion of aqueous humor is unchanged in glaucoma. Also that the existing hypertension is not a sign of a disturbed balance between the secretion and excretion of the humor. It is rather a defense reaction to maintain the balance, although the functioning of the retina is paralyzed by it.

Method for Estimation of Lactic Acid in Blood.—Collazo and Supniewski describe their comparatively simple method for estimation of lactic acid in the blood, believed to be sufficiently precise for clinical purposes. It allows the determination in 6 c.c. of blood of the glucose, lactic acid, acetone, acetic aldehyd, acetylacetic acid and beta oxybutyric acid, with only 9 per cent. of probable error.

Abnormal Innervation in Arm.—Bant observed this bilateral anomaly in a woman, aged 56. There was congenital absence of the anterior branch of the radial nerve. The brachial plexus formed only two secondary nerve trunks. It seems to be the first in the several cases recorded to date in which the anomaly was bilateral and absolutely symmetrical.

Stimulating Action of Roentgen Rays on the Proferments.—Kmietowicz and Tumidajski obtained pancreatic juice, containing exclusively zymogens, in a dog with a permanent pancreatic fistula. Irradiation was applied three times to the pancreas. The zymogens, thus submitted to the roentgen rays, were notably stimulated in vivo as well as in vitro.

Form of Glucose in Blood of Healthy Man.—Investigation on eleven normal subjects showed that a part of the blood sugar exists in a form possessing a specific rotation weaker than in alpha and beta glucose. It was manifest in fasting and during digestion. This form of glucose is similar to the substance obtained in vitro from alpha and beta glucose under the effect of insulin or of fresh muscle tissue.

Phenolsulphonephthalein Test in Kidney and Circulation Disturbances.—Lundsgaard and Moeller employed the phenolsulphonephthalein test in 102 patients, with the dye injected intravenously. They conclude that a reduced elimination of

the dye may result from a slower total blood circulation (heart affections, probably also hypertension) exerting an effect on the kidneys. Or the reduced elimination may be explained by a slower local circulation in the kidneys. The elimination of the dye was not decreased in uncomplicated nephrosis.

Transformation of Sarcoma Cells.—Fischer relates that ameboid sarcoma cells may become transformed, in pure cultures, into nonmalignant cells, resembling fibroblasts. The process seems to be exaggerated when tissues from certain parenchymatous organs are added. The tissues must be kept on ice, and incapable of proliferation.

Gynécologie et Obstétrique, Paris

12:81-139 (Feb.) 1925

Hysterectomy in Placental Apoplexy. Audebert and Pournier.—p. 81.
Pregnancy Toxemias. S. Solitsky.—p. 91.
Double Uterus and Vagina. P. Wiart and M. Sureau.—p. 101.
*Blood Transfusion in Premature Infants. Guéniot and Seguy.—p. 111.
*Blood Transfusion in the New-Born. G. Barbaro.—p. 119.

Blood Transfusion in Premature Infants.—Guéniot and Seguy succeeded in treatment of five weakly prematures by transfusion of 10 to 20 c.c. of the maternal blood. The total amount of blood in the infants was thus augmented and the erythrocytes were relatively increased. The hormones and other secretions in the maternal plasma aid in the growth of the infant, and in better functioning of its organs. The rise of temperature following the transfusion is an advantage in the hypothermia of the prematurely born. The transfusion was made in the longitudinal sinus and was perfectly tolerated.

Blood Transfusion in the New-Born.—Barbaro reiterates that the blood of the donor should represent the same group as the blood of the new born, if the transfusion is to be made intravenously. If the maternal blood belongs to a different group, it should be used only in exceptional circumstances. The compatibility of bloods is less important in infants in the first few weeks of life. In small subcutaneous or intramuscular transfusions, similarity of blood groups is not absolutely required. Consequently, the maternal blood should always be used in these transfusions.

Journal de Médecine de Lyon

6:73-96 (Feb. 5) 1925

*Reactions in the Labyrinth in Tabes. J. Rebattu.—p. 73.
Present Status of the Formaldehyd Gel Test for Pathologic Serums. J. Gaté and G. Papacostas.—p. 79.
The Milne Method in Prophylaxis of Scarlet Fever. S. Bonnamour.—p. 85.

Labyrinth Reactions in Tabes.—Rebattu found impairment of hearing in only nine of the thirty tabetics examined, and in only five of these a causal connection with the tabes seemed possible. On the other hand, the induced nystagmus tests indicated almost constantly lesions in the vestibular apparatus. Only in two was the functioning of the labyrinth apparently normal. Except the one case with Ménière symptoms, and the three with spontaneous nystagmus, none of the patients presented vertigo. Rebattu ascribes the difficulty in maintaining the balance to some vestibular disturbance. The changes in labyrinth functioning might be explained by a lesion in the nuclei of the vestibular nerve. This assumption conforms best with the inevitable pupil symptoms of tabes. Absence of the oculocardiac reflex in all the thirty patients suggests some lesion in the nuclei of the vagus. Consequently the nuclei of the eighth and of the tenth nerves are affected as well as the nuclei of the third, fourth and sixth nerves. The hyperexcitability of the labyrinth was evident in 26 per cent. and manifest hypoexcitability in 66 per cent., while in 33 per cent. there was not a trace of excitability. These labyrinth changes occur early. In two patients they appeared before the Argyll Robertson pupil. They may aid in the diagnosis of incipient tabes, and in its abortive forms.

Paris Médical

58:193-208 (Feb. 28) 1925

Medicinal Baths in General and in Skin Diseases. F. Balzar.—p. 193.
*Case of Syphilitic Osteoarthritis. Harvier and Barièty.—p. 199.
Repeated Luxations of Joints. H. Lorin.—p. 202.

Syphilitic Osteoarthritis.—Harvier and Barièty describe a case of syphilitic osteoarthritis in one knee, in the form of a chronic hydrarthrosis. The slow course, absolute absence of pains, and the roentgenograms suggested the syphilitic nature of the disease, notwithstanding the negative Wassermann test in the joint fluid and in the blood. Polymorphonucleosis was manifest in the joint effusion although the affection had lasted for seventeen years, and the knee had not been punctured for ten years.

Presse Médicale, Paris

33:249-264 (Feb. 25) 1925

*Diabetes from Lesions in Tuber Cinereum. J. Camus et al.—p. 249.
*Anatoxin in Vaccination Against Diphtheria. F. L. Marie.—p. 266.

Diabetes Induced by Nerve Lesion.—Camus, Gournay and Le Grand induced experimental lesions in the region of the tuber cinereum in rabbits by introducing fine capillary glass tubes filled with a fatty acid. Glycosuria occurred in nine rabbits out of twenty-three, and persisted from one to several weeks. The maximal amount of sugar in the urine was 6.4 gm. per cent. Macroscopic examination showed injury of the tuber cinereum in the nine positive cases, while in the fourteen negative cases, the lesion was located elsewhere. The microscopic findings in eight positive cases demonstrated injury of the paraventricular nucleus in all. In most instances the nucleus of the tuber had also been damaged. Both nuclei proved to be intact in all the negative cases. In one case, the pituitary had been completely destroyed by the capillary tube, but diabetes did not appear. Meningitis, compression, or some lesion at the base of the brain may affect the nucleus of the tuber, causing polyuria. A lesion in the walls of the third ventricle, or ependymitis, hemorrhage, or a tumor in the third ventricle may affect the paraventricular nucleus, producing glycosuria.

33:265-280 (Feb. 28) 1925

Treatment of Vascular Filariasis. L. Tanon.—p. 265.
*Anatoxin in Vaccination Against Diphtheria. F. L. Marie.—p. 266.

Anatoxin Vaccination Against Diphtheria.—Marie emphasizes the great advantages of anatoxin immunization against diphtheria. It succeeds even in cases resisting other methods of vaccination. The exceptionally rapid action of the anatoxin—particularly valuable in epidemics—was demonstrated by Zoeller. Reactions do not occur from anatoxin injections in children. In adolescents and adults the reactions are mild. The anatoxin, if refrigerated, keeps perfectly for a year. Zoeller's recent observations have confirmed the persistence of the immunity conferred by the anatoxin. None of the 102 soldiers, twice inoculated during epidemic prevalence of diphtheria, contracted the disease during the ten weeks following the injections. One, out of forty-one injected once, presented a mild form of diphtheria, while 108 soldiers, not vaccinated, all developed the disease. The discovery of anatoxin, he says, seems to have solved the vaccination problem completely, and justifies preventive vaccination on a large scale.

Schweizerische medizinische Wochenschrift, Basel

55:133-156 (Feb. 12) 1925

*Treatment of Progressive Paralysis. A. Hoche.—p. 133.
Multiple Sclerosis. K. M. Walthard.—p. 135.
Strangulation of Testis. W. Spillmann.—p. 141.
Bile in Metabolism. Herzfeld and Haemmerli.—p. 142. Cont'd.

Treatment of Progressive Paralysis.—Hoche finds that the remissions of paralysis in inoculated malaria are several times more frequent than without it, even when all the sources of error are taken into consideration. He believes it a duty to use the malaria treatment.

Riforma Medica, Naples

41:121-144 (Feb. 9) 1925

Surgery of Gastric and Duodenal Ulcers. D. Taddei.—p. 121.
*Wassermann's Tuberculosis Reaction. G. Montemartini.—p. 123.
*Function of Peyer's Patches. U. Soli.—p. 125.
*Tumor Extracts as Wassermann Antigens. A. Piazza Missorici.—p. 129.
Pneumococcus Affections. I. Jacono.—p. 132.

Wassermann's Tuberculosis Reaction.—Montemartini tried Wassermann's tuberculosis reaction in sixty-three patients with tuberculosis, fifty-eight with other affections, and twenty-four healthy subjects. He concludes that the reac-

tion should be used in diagnosis only with considerable reservations.

Function of Peyer's Patches.—Soli finds that solitary follicles and Peyer's patches have not only a lymphopoietic function, but also eliminate germs from the blood stream into the intestine. He classes them among the lympho-epithelial—not purely lymphatic—organs.

Tumor Extracts as Wassermann Antigens.—Piazza Missorici obtained excellent antigens for the Wassermann syphilis reaction from all the malignant tumors he tested. Benign tumors are not suitable—with the exception of certain myomas and adenomas.

Archivos Americanos de Medicina, Buenos Aires

2:1-34, 1925

*Necropsy Findings in Friedreich's Disease. L. Morquio.—p. 2.
Meningeal Hemorrhage in the New-Born. L. Velasco Blanco and H. Paperini.—p. 11.
Cultivation of Tubercle Bacillus. Ramon Morales Villazón.—p. 25.
Pneumococcus Meningitis. Leon Velasco Blanco.—p. 28.

Friedreich's Disease.—Morquio had the boy of 11 under observation for more than a year when he died from intercurrent typhoid. He had been brought up in the country. Pain and weakness of the legs had been noted from the age of 10. The pains did not spread, and they occurred only in the knees and when walking. There was no tenderness. The swaying gait was of a cerebellar ataxia type and the speech was impaired, but necropsy showed the cerebellum intact. The lesions were confined to the spinal cord, and there was nothing to suggest tuberculosis, syphilis or other infectious disease aside from the terminal typhoid. There was no curvature of the spine, nystagmus, talipes, or familial or hereditary feature.

Archivos Brasileiros de Medicina, Rio de Janeiro

14:647-770, 1924

*Epidemic Encephalitis. Octavio Ayres.—p. 647.
*The Engenho de Dentro Colony for the Insane. G. Riedel.—p. 703.

Epidemic Encephalitis.—Ayres reiterates that never before has a neurologic morbid entity been known capable of producing such a bewildering array of symptoms as we encounter in "Economo's disease." He compares the clinical picture with the necropsy findings in a series of cases. The findings indicated injury of the vessels rather than of the cells, but nothing could be found to explain its nature, and the diffusibility of the lesions renders exact classification impossible. The microscopic lesions, however, were most pronounced in the nuclei at the base of the brain.

Colony for the Insane.—Riedel presents a profusely illustrated report of his five years of service as director of the Engenho model colony. There were 590 inmates in 1924. Ten per cent. of the money from the sale of flowers, etc., raised in the colony was divided among the patients, and 90 per cent. was paid to the national treasury.

Crónica Médica, Lima

41:267-298, 1924

Treatment of Typhoid. Ernesto Ego-Aguirre.—p. 267. Conc'n.
Revision of Penal Code in Peru. L. Avendaño.—p. 284. Cont'n.

Crónica Médica Mexicana, Mexico City

2:45-110 (Feb.) 1925

Examination of the Gynecologic Patient. R. Pinto Escalier.—p. 66.
*Recurring Gastric Ulcer. J. N. Quagliotti.—p. 78.
Treatment of Morphin Addicts. Roger Dupouy.—p. 82.
Tetragenus Septicemia. E. Vaucher and P. Woringer.—p. 89.
*The Duodenal Tube. J. W. Tobias and E. M. Fernández Itburrot.—p. 94.

Recurring Gastric Ulcer.—Quagliotti's patient had taken a course of medical treatment for hemorrhagic gastric ulcer twice in two years. The Wassermann test was constantly negative. Then the recurring ulcer was resected, but the stomach pains and hemorrhages returned about eight months later, and the Wassermann test was then positive in the cerebrospinal fluid. Under courses of neo-arsphenamin, the pains and hemorrhages kept constantly recurring, as also under courses of mercurial treatment. As a last resort, bismuth was given and the pains ceased at once. There has been no return of the hemorrhages during the nearly three years to date. Stomatitis and tonsillitis followed the first injections of bismuth, which had been injected intramuscularly on alternate days. The treatment was then continued with longer intervals, four days or a week, and the patient had no further symptoms. No infectious focus was discovered at any time. Quagliotti interprets the case as a neurosyphilitic affection of the stomach in a man refractory to arsenicals and mercury.

Digestive Ferments and the Duodenal Tube.—The technic and interpretation of the findings are discussed, especially in relation to bilirubin.

Sciencia Medica, Rio de Janeiro

2:667-792 (Dec.) 1924

Anemia in Infants from Latent Scurvy. O. de Oliveira.—p. 667.
Present Status of Surgery of the Thorax. R. Jansen.—p. 674. Conc'n.
Endemiology and Prophylaxis of Leprosy. J. J. Abou-Adhar.—p. 697.
*Gonococcus Endocarditis. E. Villela and C. Magarinos Torres.—p. 703.
Necropsy Findings in Myeloid Leukemia. R. de Souza Campos.—p. 710.
Lutz' Juxta-Articular Nodules. C. Pinto.—p. 734.
Helminths of Batrachians in Brazil. Lauro Travassos.—p. 746.
Isotonic Solutions for Injection. J. Custodio da Silva.—p. 749.

Malignant Endocarditis of Probable Gonococcal Origin.—The woman died the twentieth day of the acute ulcerative endocarditis in the course of chronic gonorrheal adnexitis and chronic nephritis. The septicemia began with a chill, and the clinical picture resembled that of typhoid. Tests for typhoid and for malaria were negative, and necropsy revealed what seemed to be gonococci in the heart lesions. The aortic and mitral valves had been almost totally destroyed.

Deutsche medizinische Wochenschrift, Berlin

51:259-298 (Feb. 13) 1925

*Limits of Food for Humanity. M. Rubner.—p. 259.
*The Bone Marrow. V. Schilling.—p. 261.
*Immunity Against Ultravisible Virus. F. Breinl.—p. 264.
*Gram-Positive Cocci in Chronic Gonorrhea. Wichmann and Schlunk.—p. 266.
Localization of Dysarthria. Wimd-Mayendorf.—p. 268.
Constitution and Endocrines. J. Bauer.—p. 269.
Yolk Water for Tubercle Bacilli. K. Weise.—p. 270.
Paratyphoid B in Small Child. Hage.—p. 270.
Percutaneous Application of Salicylates. Kretschmer.—p. 271.
*Phenobarbital Poisoning. L. Weig.—p. 272.
Treatment of Acute Gonorrhea. L. Sirota.—p. 272.
Failures of Bismuth Treatment of Syphilis. E. Bauer.—p. 273.
Survey on Psychiatry. Bostroem.—p. 274. Conc'n.
Prohibition in America. Abel.—p. 276.
The Proposed Penal Code. S. Alexander.—p. 277.
The Second Spanish Medical Congress. O. David.—p. 278.
Eosin Sensitization to Rays. E. Gassul.—p. 280.
*The Fatal Disease of E. Bunn. F. v. Müller and Jehn.—p. 281.
Scurvy and Rickets. E. Stettner.—p. 292. Conc'n.

Limits of Food for Humanity.—Rubner points to the surprising constancy of the caloric value of food and of the proportions of proteins, fats, and carbohydrates in the diet of all civilized nations. Only the sources (animal or vegetable) are different. Whether the earth will be able to nourish five or twenty billions, or whether birth control will delay the process, there is no doubt in his opinion that the great final fight for food is within sight. The utilization of energy is more hopeful. He believes that animals do not take the food from man; the herbivora convert into proteins and fats substances which man cannot utilize.

The Bone Marrow.—Schilling gives the history of research on the bone marrow.

Immunity Against Ultravisible Virus.—Breinl discusses the peculiar immunity process obtained by simultaneous injection of typhus virus and convalescents' serum. There is no fever, nor other symptom of infection ("infection inapparent," Nicolle), but the organs of these animals are infectious. Dependable immunity is produced. It seems that the serum acts against aggressins.

Gram-Positive Cocci in Chronic Gonorrhea.—Wichmann and Schlunk use the term: gonorrhea lenta for cases of chronic gonorrhea with gram-positive diplococci. They believe that these germs might be degenerative forms of gonococci, and they are certainly only mildly pathogenic, as Schlunk proved on himself. The incubation period was long—nineteen days; the inflammation subsided after eight days. Staphylococci are not important.

Phenobarbital Poisoning.—Weig reports a fatal poisoning with 1 gm. of luminal taken by an arteriosclerotic woman, 67 years of age. She died in twenty-nine hours.

Fatal Disease of E. Bumm.—Müller and Jehn describe Bumm's last sickness: He had pains in the liver region, diagnosed as cholecystitis one month before. On November 29 an attack of colic occurred, which responded to morphin. On December 31, sudden pains and signs of ileus gave the indication for operation. Cholecystectomy was performed, but in the evening the peritonitis progressed, and Bumm died January 2. They emphasize the difficulty of the diagnosis and of the indications.

81: 299-340 (Feb. 20) 1925

*Susceptibility to Infection. A. Gottstein.—p. 299.
*Culture of Spirochaeta Dentium. H. Reiter.—p. 303.
*Bacteriophages in Intestine. C. Prausnitz and V. van der Reis.—p. 304.
*Appendix and Development of Oxyuris. Drigalski and Koch.—p. 309.
*Increasing Frequency of Calculi in Hanover. G. Praetorius.—p. 311.
Iontophoresis. F. Wirz.—p. 311.
*Colon-Bacteriuria of Small Girls. F. Voelcker.—p. 313.
*Pneumothorax and Exeresis of Phrenic Nerve. Unverricht.—p. 314.
*Lobelin in Internal Medicine. M. Rosenberg.—p. 315.
*Treatment of Morphin Poisoning. S. Stern.—p. 316.
"Protein Therapy." K. Brüneche.—p. 317.
Treatment of Erysipeloid. K. Nowakowski.—p. 317.
Surgical Cotton in Ribbon Form. A. Hartmann.—p. 319.
Survey on Cancer Research. Teutschlaender and R. Münzner.—p. 320.
Light, Air and Gymnastics. Vollmer.—p. 321.
*Intracutaneous Cowpox Vaccination. E. Kovacs.—p. 322.
French Fight Against Trypanosomiasis. F. Steudel.—p. 322.
Theoretic Pathology at Mayo Clinic. L. Aschoff.—p. 323.

Susceptibility to Infection.—Gottstein discusses war statistics and the periodicity of measles and diphtheria morbidity. The five years' course of measles is simply due to the universal susceptibility and transmission of the infection from school children to the young children. This is important for prevention of the disease. The variations in diphtheria morbidity are extended over decades, and are probably due partly to hereditary elements.

Culture of Spirochaeta Dentium.—Reiter describes his method for obtaining pure cultures of *Spirochaeta dentium*. He uses a piece of an organ, in equal parts of horse serum and physiologic isotonic solution heated to coagulation, and utilizes the tendency of the spirochetes to grow toward the organ.

Bacteriophages in Human Small Intestine.—Prausnitz and Reis found, only exceptionally, bacteriophages for the typhoid, dysentery and colon groups in the small intestine of man. There were no indications for the possibility of origin of bacteriophages by the action of enterokinase on trypsin, nor for the pathogenic action of bacteriophages in pernicious anemia or gastro-intestinal diseases.

The Appendix and Development of Oxyuris.—Drigalski and Koch found the same percentage (57) of oxyuriasis in 100 appendectomized school children as in their 100 neighbors. Consequently the appendix cannot be the chief place of development of the oxyuris. Their experiments with autoinfection speak against Leuckart's theory that the infection can keep on only by reinfection through the mouth.

Increasing Frequency of Calculi in Hanover.—Praetorius has observed a surprising increase in the number of cases of bladder calculi in Hanover since the war. More than two thirds of the calculi are oxalates. This may be due either to disturbances of digestion or to a nervous disorder.

Colon-Bacteriuria of Girls.—Voelcker observed large amounts of an alkaline secretion, with an odor resembling that of urine, in the vagina of small girls suffering from colon-bacteriuria. Vaginal injections of 5-10 c.c. of a 1 per cent. solution of aluminum acetate were followed in several cases by complete recovery from the bacteriuria even in pyelitis.

Pneumothorax and Exeresis of Phrenic Nerve.—Unverricht reports on two patients who had been previously treated by pneumothorax and exeresis of the phrenic nerve. Later indications for pneumothorax in the other side were given, but this treatment was impossible because of the dyspnea. Therefore the nerve exeresis must not be used as a routine procedure.

Lobelin in Internal Medicine.—Rosenberg had good results with lobelin in paralysis of the respiration in anesthesia, and in gas, morphin and scopolamin poisoning. He also used it in pneumonia when the somnolent patient did not ventilate the lungs sufficiently. The action is transitory. The dose for intravenous injection is 0.003 gm., and it has to be repeated; for subcutaneous injection, the dose is 0.01 gm. every ten minutes if necessary.

Morphin Poisoning.—Stern's patient was unconscious after having taken 3.6 gm. of morphin. In spite of the usual procedures (gastric lavage, atropin), the respiration was stopping. The patient had only three or four shallow breaths after a pause of twelve to fifteen seconds. He gave her 0.01 gm. lobelin intramuscularly. The respiration improved after seven minutes. The second and third injections, ten minutes apart, had excellent effects. Later he made the intervals one half to one hour. The patient recovered.

Intracutaneous Cowpox Vaccination.—Kovacs confirms Leiner's good results with intracutaneous vaccination of smallpox. He dilutes the lymph forty-fold as Singer advises. If the injection is not too superficial, the method is milder than the usual technic.

Jahrbuch für Kinderheilkunde, Berlin

103: 1-78 (Feb.) 1925

Tonus of Muscles in Children. H. Opitz and H. Isbert.—p. 1.
*Homesickness in Young Children. G. Schwab.—p. 15.
Amin Formation in Infant Intestine. Meyer and Rominger.—p. 40.
Dislocation of Eyeball by Birth Trauma. S. Wolff.—p. 55.
Subcutaneous Rupture of Trachea. Idem.—p. 57.
Case of Syphilitic Pseudoparalysis in Boy. Idem.—p. 59.
"Heart Tetany"; Chronic Tetany. Idem.—p. 59.
Case of Death from Swallowing Air. Idem.—p. 67.
Fatal Ileus from Intestinal Spasm. Idem.—p. 68.

Homesickness in Young Children.—Schwab presents a study of the homesickness reactions in children, aged 2 to 4, in the hospital, with description of nine cases. He emphasizes the practical significance in the mental and physical effect on the child, and the treatment of the homesick child.

Klinische Wochenschrift, Berlin

4: 289-336 (Feb. 12) 1925

*Mild Pancreatitis. G. Katsch.—p. 289.
*Induced Tonus Changes in Man. K. Goldstein.—p. 294.
*Improvement of Abderhalden's Reaction. H. Sellheim.—p. 299. Conc'n.
*Action Currents of the Iris. E. P. Braunstein.—p. 302.
*The Lactic Acid in the Blood. B. Mendel et al.—p. 306.
*Diuresis and Metabolism. W. Kempmann and H. Menschel.—p. 308.
Treatment of Cholecystitis. Adlersberg and Neubauer.—p. 310.
*Manganese Chlorid and Anaphylaxis. A. Klopstock.—p. 312.
*Nuclesl Reaction. H. Voss.—p. 314.
Some Interesting Tumors. Sonntag.—p. 314. Conc'n, p. 363.
Sciatica. P. Schuster.—p. 316.
Vacation Colonies. E. Schlesinger.—p. 319.

Mild Pancreatitis.—Katsch believes that mild affections of the pancreas are quite frequent. Examination of the stool after a test meal sometimes gives valuable information. It is negative in other cases. Determination of the diastatic ferment in the urine should be made after the attacks. The pancreatic lipase in the serum is another aid in diagnosis. Pains which radiate toward the left side, and a zone of tenderness to the left indicate pancreatitis.

Induced Tonus Changes in Man.—Goldstein continues his studies on the induced changes of tonus. He emphasizes the influence of unconscious movements and of tendencies to such movements on the tactile and visual perception of space—including the subject's own body.

Improvement of Abderhalden's Reaction.—Sellheim used the Lüttge and Mertz modification of the Abderhalden reaction (extraction with 96 per cent. alcohol) for prediction of the sex of the fetus. He had 98.7 per cent. correct results in the last series of 150 cases. The reaction begins as early as in the second month. This seems to indicate that the sex of the fetus determines the development of the gonads, and not the gonads, the sex. The passage of the products from the fetus to the mother may explain the rejuvenating influence of pregnancy. With the same alcohol extraction he found that amino-acids are bound to the red corpuscles of the blood. His clinic is developing another seroreaction; they digest serum with an extract from cancers.

Action Currents of the Iris.—Braunstein derives action currents from the iris without enucleation of the eye.

The Lactic Acid in the Blood.—Mendel, Engel and Goldscheider found an increased lactic acid content in the venous blood when a constricting band was applied while taking the blood.

Diuresis and Metabolism.—Kempmann and Menschel increased markedly in healthy subjects the diuretic action of a theobromin preparation by addition of calcium or potassium salts. Not only the diuresis but also the inspissation of the blood increased. The extrarenal elimination of water was also greater.

Manganese Chlorid and Anaphylaxis.—Klopstock protected sensitized guinea-pigs against a twofold lethal dose of the antigen by a preliminary injection of 4 mg. of manganese chlorid, given two to eight hours before.

Nuclear Reaction.—Voss confirms Feulgen's and Rosenbeck's microchemical determination of thymonucleinic acid in cells. Only the ova of young frogs gave a negative reaction.

41: 337-384 (Feb. 19) 1925

*Immunology of Tuberculosis. G. Bessau.—p. 337.
*Synthesis of Carbohydrate in Muscle. O. Meyerhof.—p. 341.
*Reduction of Ocular Tension. L. E. Wolff and S. E. de Jongh.—p. 344.
*Microphone for Heart Currents. H. Rehder.—p. 348.
*Affections of Parts of Brain. P. Schwartz.—p. 349.
*Allergy and Leukopenia. H. Hahn and C. v. Bramann.—p. 353.
"Action of Pilorhizin." Y. Koppányi.—p. 361.
*Bromin Content of Blood. H. Bernhardt and Ucko.—p. 362.
*Slow Resorption of Insulin. H. Lange and R. Schoen.—p. 362.
Treatment of Morphine Addiction. C. Römer.—p. 364.
Embryonal Differentiation of Retina. H. Rothschild.—p. 366. Cont'd.
Comparative Vital Statistics. K. Freudenberg.—p. 383.

Immunology of Tuberculosis.—Bessau attributes the manifestations of tuberculosis allergy to specific cells, which he calls tuberculocytes. They develop also locally at the point of the tuberculin reaction, which represents simply a new tuberculous focus. The tuberculosis immunity is not humoral, and the tuberculin reaction is not of anaphylactic nature, although a poison similar to the anaphylatoxin is produced. Both the allergy and the immunity are a function of the tuberculocytes. He had encouraging results with injections of killed tubercle bacilli in guinea-pigs. He also succeeded in producing positive skin tests in an idiotic child treated with boiled tubercle bacilli injected into an inguinal lymph gland, swollen after smallpox vaccination of the thigh. Large lymphomas developed.

Synthesis of Carbohydrate in Muscle.—Meyerhof reports on further investigations of his school on the second phase of the work of muscles. In this regenerative part, one molecule of glucose (or two molecules of lactic acid) are oxidized to resynthesize eight molecules of lactic acid into glycogen. They found in experiments on surviving muscles from frogs and rats that this reaction is induced by the anion of the lactic acid. Increased hydrogen ion concentration alone decreases the oxygen consumption of muscles. The reaction requires intact muscles and the presence of phosphates in the fluid. Pyruvic acid was the only one of several substances tested which could supplant lactic acid. The subsequent increase in oxygen consumption is also most probably used for synthesis of glycogen.

Reduction of Ocular Tension.—Wolff and de Jongh found a decreased ocular tension in animals that had spasms after injection of insulin and other poisons (strychnin, camphor, etc.). The serum from these animals lowered the ocular tension in other animals when injected intravenously. The action was pronounced even after removal of the serum proteins. Resection of the cervical sympathetic had no influence on the phenomenon.

Microphone for Heart Currents.—Rehder's preliminary note mentions a radio-apparatus for auscultation of the galvanic currents of the heart. The electric potential of the contraction is 1/5,000-1/20,000 volt. He amplifies the current by five audion tubes sufficiently to make it demonstrable on a milliampere meter or a telephone. The apparatus costs only a tenth of the price of an electrocardiograph.

Affections of Distinct Parts of the Brain.—Schwartz shows that each of the large parts of the brain (cortex, white substance, basal ganglions) may be comparatively frequently affected throughout its whole extent without any changes in the other parts. He attributes this phenomenon to their independent vascularization. Yet it is not impossible that the area may be primarily affected by reason of some chemical affinities.

Allergy and Leukopenia.—Hahn and Bramann have continued their research on the leukopenia following intracutaneous injections. They combined them with injections of pilocarpin. This does not produce leukopenia regularly. They find that the vagotonia hypothesis neglects too much the condition of the end-organ of this vagus reflex. This organ may be hypersensitive to normal stimuli.

Physiologic Bromin Content of Blood.—Bernhardt and Ucko found bromin as a normal constituent of human blood. They publish the colorimetric method of determination which gives 1-1.5 mg. per hundred cubic centimeters of blood in normal subjects.

Slow Resorption of Insulin.—Lange and Schoen prolonged the resorption of insulin in mice by injecting it in a cholesterol emulsion.

Medizinische Klinik, Berlin

21: 229-268 (Feb. 13) 1925

Hypertension. M. Matthes.—p. 229. Conc'n, p. 271.
*Weight of New-Born and Nutrition of Mother. H. Abels.—p. 234.
*Surgery in Croup. F. Reiche.—p. 238.
Differential Diagnosis of Influenza and Appendicitis. Assmann.—p. 239.
*Ultraviolet Rays on Mucous Membranes. Laqueur and Wiener.—p. 242.
Forceps for Seizing Uterine Cervix. W. Koerting.—p. 244.
Myeloma Simulating Myelitis. K. Gaube.—p. 244.
Epidemic of Hiccup. Kino.—p. 245.
Extragenital Syphilitic Infection. O. Lippitz.—p. 246.
*Ergot in Meteorism. L. Firgau.—p. 246.
*Malaria Treatment of General Paralysis. F. T. Münzer and E. Singer. —p. 247.
Trauma Exonerated in Death of Cardiopath. H. Engel.—p. 253.
Psychotherapy. H. Pendel.—p. 254. Cont'n.
Irradiation of Cancer of Breast. Holfelder.—p. 255. Conc'n.
A New Epidemic Disease in Japan. Möllers.—p. 267.

Weight of New-Born and Nutrition of Mother.—Abels' statistics show a lower weight of the new-born babies of undernourished mothers. The pregnancy also lasts a few days longer. The lack of vitamins has an influence also in experiments. He discusses the possible therapeutic utilization of the data presented.

Avoiding Surgery in Croup?—Reiche advises tracheotomy even in descending diphtheria. The main obstacle is always the larynx.

Ultraviolet Rays in Mucous Membranes.—Laqueur and Wiener found the same decrease in blood sugar after irradiation of mucous membranes (mouth or vagina) as after general irradiation.

Ergot in Meteorism.—Firgau had fine results with treatment of meteorism with ergot.

Malaria Treatment of General Paralysis.—Münzer and Singer determined the hemolysin titer of the blood and cerebrospinal fluid in paralysis patients treated with malaria. The cases with the most favorable prognosis are those who have and retain a negative reaction in the cerebrospinal fluid while having a normal titer in the blood serum.

21: 269-306 (Feb. 20) 1925

Treatment of Fractures. R. Mühsam.—p. 269.
*Extramedullary Spinal Tumors. F. Herzog.—p. 275.
*Oatmeal-Salt Diet in Treatment of Inflammations. Andersen.—p. 277.
*Pilorhizin Glycosuria in the Pregnant. R. Kräuter.—p. 278.
Liver Changes in Hemorrhagic Pancreas Necrosis. N. Syzak and N. Nakamura.—p. 281.
*Sensory Jacksonian Epilepsy. W. Behrendt.—p. 283.
Sulphur Treatment. G. Nobl and R. Kantor.—p. 285.
Intravenous Injection. Wunderlich.—p. 287.
Treatment of Leg Ulcers. O. Bechtle.—p. 288.
*Reading the Meinicke Reaction. Alexander and Emmel.—p. 288.
"Biochemistry in Skin Affections." E. Puhy.—p. 290.
Reply. G. Stümpke and G. Soika.—p. 290.
Obstetric Breviary. F. Eberhart.—p. 292. Cont'n.
Orthopedic Affections of Upper Extremities. S. Peltesohn.—p. 293.
Superstition in Views on Psychoses. A. Buschke.—p. 304.

Extramedullary Spinal Tumors.—Herzog discusses the symptoms in his correctly diagnosed eight cases of extra-

medullary spinal tumors. Pneumorhachis was tried in one case, but the findings with it were misleading. The operation confirmed the clinical localisation. He recommends the following method as revealing the slightest changes of sensibility at the upper limit of the affected zone: He draws a soft brush lightly over the skin and asks the patient to tell when the sensation changes.

Oatmeal-Salt Diet in Treatment of Inflammations.—Andersen transforms a chronic inflammatory process—especially an ulcer—into an acute form by giving the patient oatmeal, meat and 10 gm. of sodium chlorid daily. The ulcers flare up and heal rapidly under the acidosis thus induced.

Phlorhizin Glycosuria in the Pregnant.—Kräuter observed phlorhizin glycosuria sometimes in nonpregnant women. The test was frequently negative in pregnancy. Consequently it is only one of the probable signs of pregnancy.

Sensory Jacksonian Epilepsy.—Behrendt's patient had attacks of sensory jacksonian epilepsy after a fall from a horse. The cerebrospinal fluid was yellow, but otherwise normal. The boy recovered in about eight weeks. The attacks were probably due to a serous meningitis.

Reading the Meinicke Reaction.—Alexander and Emmel confirm the good results of Elkeles' method of estimating the Meinicke turbidity test by the sediment. The nonspecific floccules float and do not settle to the bottom as the specific floccules do.

Münchener medizinische Wochenschrift, Munich

72: 249-288 (Feb. 13) 1925

*Cholin and the Gastro-Intestinal System. R. Magnus.—p. 249.
*Clinical Use of Cholin. F. Klee and O. Grossmann.—p. 251.
Attitude of the Patient Toward His Disease. E. Stern.—p. 254.
Treatment of Pernicious Anemia. C. Gottschalk.—p. 257.
*Potassium Permanganate Poisoning. R. Siegel.—p. 259.
Treatment of Acute and Chronic Dysentery. K. Reicher.—p. 261.
*Potential Immortality. W. Goetsch.—p. 262.
Medicolegal Obstetrics. M. Hofmeier.—p. 264.
*Boric Acid in Leukorrhea. H. Rösch.—p. 265.
"Productive Welfare Work." R. Lehmann.—p. 266.
Obesity. F. Umber.—p. 267.
Medicine and Mortality in Bavaria. R. Pusha.—p. 270.
Development of the Medical Profession. G. Honigmann.—p. 270.

Cholin and the Gastro-Intestinal System.—Magnus surveys the results of investigations on cholin made during the last twelve years in his laboratory. Weiland made the first observations, and Le Heux identified the substance produced in Ringer's solution by surviving intestines as cholin. It is the physiologic stimulant for Auerbach's plexus. Atropin paralyses it. This explains the conflicting reports on the action of atropin on the intestinal movements: When there is little cholin, atropin stimulates the plexus. Contrary to pilocarpin and physostigmin, cholin produces only normal movements, not spasms. It was effectual in experimental paralysis of the bowel in animals (peritonitis, chloroform anesthesia) in doses of 10 mg. per kilogram; 35 mg. of cholin hydrochlorid is fatal if injected rapidly. Slow injections (0.9 mg. per kilogram and minute) were tolerated for hours; for instance, 200 mg. per kilogram in four hours. The dose for an adult would be 0.6 gm. of the cholin hydrochlorid in physiologic sodium chlorid solution infused slowly.

Clinical Use of Cholin.—Klee and Grossmann to date have given 120 intravenous infusions of 0.6 gm. of cholin chlorid in 240 c.c. of physiologic sodium chlorid solution. The duration of each infusion was at least seventeen minutes. No untoward effects were observed. Redness of the face, increased salivation, slower pulse and lower blood pressure—especially in hypertension—were observed. In some hypertension patients, the blood sugar increased, contrary to the expectations. The action was excellent in paralytic ileus, and might be tried in atonic constipation. Morphin addicts were well influenced in the period of abstinence phenomena.

Potassium Permanganate Poisoning.—Siegel reports a case of fatal poisoning with 5 gm. of potassium permanganate taken with suicidal intent. Tracheotomy relieved the dyspnea of the patient, but he died the next day.

Potential Immortality.—Goetsch discusses the new observations which prove the possibility of persistent division of protozoa without sexual phases. He and other authors found the same phenomenon to a certain extent in the lowest metazoa. Since the division means in a way the end of individual life, he endeavored to keep these lowest animals long without division. He succeeded. Consequently both the potential immortality and the potential eternal individual life in these lowest forms of life are thus established, in his opinion.

Treatment of Leukorrhea.—In treatment of vaginal leukorrhea, Rösch deposits in the vagina 0.5 gm. of boric acid, at first daily, and then three times a week. The course of treatment lasts from one to three weeks.

Wiener klinische Wochenschrift, Berlin

38: 189-214 (Feb. 12) 1925

Localisation of Argyll Robertson Phenomenon. Spiegel.—p. 189.
Significance of Iodin in the Thyroid Hormone. M. Eng1ander.—p. 193.
*Percussion of the Apexes. E. Czyhlarz.—p. 195.
*Partial Antigens. F. Mattausch.—p. 196.
Ichthyosis or Verrucous Nevus? E. Urbach.—p. 199.
Andreotti's Treatment of Tuberculosis. J. B. Andreotti.—p. 202.
Idem. H. Poindecker.—p. 204.
Pharmacotherapy of Pulmonary Tuberculosis. M. Weiss.—p. 204.
New Rickets Problems. H. Wimberger. Supplement.—pp. 1-16.

Percussion of the Apexes.—Czyhlarz observed the disappearance of a moderate apical dulness in tuberculosis after five deep breaths. When, after this, he massaged the apexes toward the spine and along the clavicle, the dulness reappeared, and was more pronounced than before.

Partial Antigens.—Mattausch considers the diagnostic tests with partial antigens a valuable indicator of the biologic reactivity of the tuberculous patient.

38: 215-242 (Feb. 19) 1925

*Surgery of Blepharospasm. M. Sachs.—p. 215.
*The Argyll Robertson Pupil. E. A. Spiegel.—p. 216. Conc'n.
*Irradiation in Nonmalignant Gynecologic Diseases. P. Werner.—p. 217.
*Idiosyncrasy and Anaphylaxis. B. Busson and N. Ogata.—p. 219.
*Raynaud's Gangrene in the New Born. K. Barmwater.—p. 220.
*Unusual Intra-Abdominal Hemorrhages. H. Kunz.—p. 222.
*"Meningitic" Encephalitis. O. Lichtwitz.—p. 223.
*Surgery of Atrophic Paralysis. V. Paasch.—p. 226.
Treatment of Acute Polyarthritis. A. Müller-Deham.—p. 228.
Survey on Syphilis. R. Gruss.—p. 228.
Tuberculin in Diagnosis and Treatment. H. Koch. Supplement, pp. 1-8.

Surgery of Blepharospasm.—Sachs describes his method of discission of the orbicularis muscle. He obtained excellent results in four patients with grave senile blepharospasm.

The Argyll Robertson Pupil.—Spiegel localizes the pathologic change responsible for the Argyll Robertson phenomenon in the synapsis between the centripetal and the efferent neurons. This blocking of the synapsis affects necessarily also the impulses originating in the labyrinth (vestibular reaction of pupils).

Irradiation in Nonmalignant Gynecologic Diseases.—Werner found that in repeated irradiation of the ovaries for metrorrhagia, progressively decreasing doses were sufficient.

Idiosyncrasy and Anaphylaxis.—Busson and Ogata report the histologic findings in guinea-pigs sensitized and killed by inhalation of an extract from horse scales. The changes were identical with those produced by reinjection into the vein. The anaphylactic origin of bronchial asthma is more than probable.

Raynaud's Gangrene in the New-Born.—Barmwater describes a case of symmetrical gangrene present at birth in a girl with a congenital valvular defect and cyanosis.

Unusual Intra-Abdominal Hemorrhages.—Kunz reports a case of a ruptured varix on the surface of a uterine myoma and another case of grave hemorrhage from a strangulated large lipomyoma of the small intestine.

"Meningitic" Encephalitis.—Lichtwitz advises to think of the possibility of encephalitis in every case of "serous meningitis." Repeated examinations of the cerebrospinal fluid are of diagnostic value just as the repeated punctures are useful therapeutically.

Surgery of Atrophic Paralysis.—Passek observed two patients with gradually progressing paresis and atrophy of the muscles of an upper extremity. He diagnosed a

compression of the cervical spinal cord by enlarged vertebrae. Both patients recovered surprisingly rapidly after laminectomy.

Zeitschrift für Urologie, Leipzig

19: 81-159, 1925

Tumor in Horseshoe Kidney. N. C. Haas.—p. 81.
*Case of Spasm of Kidney Vessels. H. Haebler.—p. 86.
The So-Called "Os Penis." M. Jacoby.—p. 90.
Tuberculosis of Congenitally Single Kidney. R. Schröder.—p. 91.
Pathologic Anatomy of Bladder Tumors. E. Christeller.—p. 103.
*Treatment of Bladder Tumors. E. Joseph.—p. 118.
Case of Hypernephroma. S. Perlmann.—p. 136.
Physiology of Endocrine System, and Impotence from Lack of Hormones. L. Pulvermacher.—p. 146. Conc'n.

Vascular Spasm in the Kidneys.—Haebler discusses a case in a woman, aged 42, with recurring, severe attacks of kidney colic for the past two years, with deep, sharp pains in the lumbar region, shooting into the gluteal region, insufficient secretion of urine, and vomiting. Between the attacks, in warm weather, her health is good. The last, most violent attack, affecting the kidney, gluteal regions and the heart, and ending with collapse, set in with transient retention of urine. Traces of albumin and a few erythrocytes were found in the urine after the attack. Except in midsummer, the patient complains of cold, and an unnatural absence of thirst is noted. The diagnosis is spasm of the renal vessels, stenonephria, "renal angina," with angina pectoris, as the predominant manifestations of a general angiospastic diathesis. Periarterial sympathectomy of the pedicle of the kidney might be indicated if it were not for the general angiospastic diathesis. Injections of antispasmodics at the beginning of the attacks and a stay in a warm climate are recommended.

Zentralblatt für Chirurgie, Leipzig

52: 401-448 (Feb. 21) 1925

Removal of Calculus in Kidney Pelvis without Luxation of Kidney. D. Kulenkampff.—p. 402.
*Paravertebral Anesthesia in Gallbladder Operations. F. Mandl.—p. 405.
*Ligation of Tonsillar Artery in Field of Operation. W. Smital.—p. 408.
Partial Thoracoplasty for Interlobar Empyema. M. Beth.—p. 409.
Incarcerated Inguinal Hernia. A. Zimmermann.—p. 410.

Paravertebral Anesthesia of Certain Segments for Gallbladder Operations.—Läwen has applied paravertebral anesthesia in the differential diagnosis of visceral pains in puzzling cases. A single injection in the tenth dorsal segment may relieve continuous or spasmodic pains in the gallbladder region. Mandl's extensive experience with these paravertebral injections demonstrated that the effect is most certain on the gallbladder. He has successfully used this method of anesthesia for operations on the biliary tract in three cases. With the patient in the sitting position, a paravertebral injection of 10 c.c. of a 0.5 per cent. solution of procain is made, at the right, in the tenth and again in the eleventh dorsal segment. The paravertebral injection does not touch any important centers and is harmless, and much simpler than splanchnic anesthesia. Performed as described, it avoids discomfort for the patient. Illyes applies the paravertebral method in kidney surgery.

Ligation of Tonsillar Artery in Field of Operation.—After experiments on cadavers, Smital successfully used the following method, in three cases: The tonsil is shelled out from its capsule to leave only a cord, about 1 cm. wide, containing the tonsillar artery. This pedicle is clamped close to the tonsil. With a curved needle-holder, fine strong silk is quilted around this pedicle and tied tight. After ablation of the tonsil, the upper part of the pedicle is then held with curved artery forceps (the tonsillar artery not included), and the suture is cut. If hemorrhage occurs, traction on the forceps stretches the pedicle and discloses the bleeding point. Some skill in ligating in the depths is all that is necessary. He commends the procedure to those who, like himself, live several miles from the hospital.

Zentralblatt für Gynäkologie, Leipzig

49: 401-448 (Feb. 21) 1925

Echinococcosis in Female Genitalia. J. C. Lehmann.—p. 402.
*Local Treatment in Uterine Hemorrhages. E. M. Fuss.—p. 404.
*Own Blood Infusion in Ruptured Tubal Pregnancy. E. Hempel.—p. 407.
A Successful Salpingostomatoplasty. E. A. Björkenheim.—p. 412.
Case of Vulvar Sarcoma. F. Netzer.—p. 413.
Case of Lipoma in Labium Majus. M. Urich.—p. 416.
"Prevention of Air Embolism in Insufflation." F. Goppert.—p. 418.
Relations Between Ovarian and Menstrual Cycle. T. Wieszynski.—p. 419.
*Arrest of Hemorrhage After Gynecologic Operations. Brunzel.—p. 423.

Value of Local Treatment in Uterine Hemorrhages.—Fuss' material (seventy-eight cases in women, aged 37 to 73) showed that hemorrhages due to chronic inflammations, atrophic mucous membrane in older women, and limited hyperplasia (polyps) were generally cured by local treatment (curettement, cauterization, etc.). Affections of the uterine mucosa with diffuse hyperplasia and those due to functional disturbances of the ovaries, as a rule, failed to respond to local treatment. Treatment of the diseased ovaries is the only effective method for the hemorrhages in puberty and in young women with tumors in the adnexa. In the latter particularly, conservative methods and sometimes operative intervention are recommended, while in the former irradiation of the spleen and also ovary transplantation may be required. For the hemorrhages from diffuse hyperplasia (almost 70 per cent. of his cases) destruction of the ovarian tissue by roentgen irradiation is the final resort.

Own Blood Infusion in Ruptured Tubal Pregnancy.—Hempel has performed twenty-six reinfusions, with rapid recovery in twenty-five cases. The transient hemoglobinuria in one instance indicates the danger in the use of hemolyzed blood from the abdominal cavity in reinfusion. In his treatment of ruptured tubal pregnancy, he regards the restoration of the extravasated blood as the first and most important step. He begins with infusion of sodium chlorid solution. With this under way, a small, deep, lengthwise incision is made in the abdomen, the lips of the peritoneum drawn high to prevent outflow, and the blood is scooped up with a small, long-handled ladle. When the first 200 c.c. of blood has been obtained, this blood is strained through gauze, citrated, and poured into the irrigator with the saline, and the infusion proceeds. Gradually, during the reinfusion, the abdomen is opened farther and the remaining blood is removed. Excision of the ruptured tube then follows. If the patient consents, the second tube is also excised, as tubal pregnancies recur in 5 to 9 per cent. of the cases.

Arrest of Hemorrhage After Gynecologic Operation by Extraperitoneal Ligation of Hypogastric and Uterine Arteries.—After arrest of sudden bleeding in Brunzel's patient by ligating a branch of the left uterine artery, a second profuse hemorrhage occurred twelve days later. With the danger of a third and fatal hemorrhage, local ligation would not suffice, and he ligated the hypogastric artery, distad to the origin of the superior gluteal artery, and the uterine artery, close to the hypogastric. This extraperitoneal ligation of the hypogastric artery or its branches is an easy, rapid and certain intervention, with an excellent view of the field. This procedure, often needed on only one side, as here, affords a better opportunity to ligate only the uterine artery or the hypogastric below the origin of the superior gluteal artery, important after great loss of blood, as the patient might easily develop bed-sores. In all ligations, no more should be tied than is essential for the certain arrest of the bleeding.

Casopis lekaruv ceskych, Prague

64: 241-280 (Feb. 14) 1925

Nerve Endings in Corti's Organ. N. Solovcov.—p. 241.
*Etiology and Treatment of Eczema. Hübschmann.—p. 244.
Psychoses with Aberration of Sex Instinct. H. Bondy.—p. 247.
Origin of Anomalies of Refraction. O. Leser.—p. 250. Cont'n.
Some Otolaryngologic Cases. F. Hinger.—p. 256.
*Radium Treatment of Leukemia. F. Tomásek.—p. 259.

Etiology and Treatment of Eczema.—Hübschmann used Lebedew's method in eczema, lichen planus and senile pruritus. Some patients recovered after three daily injections of 10 c.c. of a 10 per cent. sodium bromid solution; others required more, up to fifteen. No untoward effects were observed.

Radium Treatment of Leukemia.—Tomásek irradiates patients, refractory to the roentgen rays, with permanent application of radium for one to three weeks.